ADDENDUM NO. 4 Appoquinimink School District Everett Meredith Middle School Bid Package 'A' Page 1 17 April 2020

The bid due date has been extended.

Bids will be received until 2:00 p.m. on Tuesday, 28 April 2020. No questions from bidders will be accepted after, Tuesday, 21 April 2020.

The location for receipt of bids is Room 148 of the Appoquinimink School District, Marion Proffitt

Training Center, 118 South Sixth Street, Odessa, Delaware 19730

In accordance with the active Public Health State of Emergency related to the novel coronavirus ("COVID-19"), and Social Distancing recommendations of the Delaware Department of Health and Social Services, the Appoquinimink School District will be proceeding with the following logistics plan for managing bid receipts and the subsequent public bid opening:

- 1) Physical copies of bids will be received at the Appoquinimink School District, Marion Proffitt Training Center, 118 South Sixth Street, Odessa, Delaware 19730. Bids may be hand delivered or mailed/shipped. <u>Electronic bids will not be accepted</u>. Bidder assumes full responsibility for timely delivery at location designated for receipt of bids. Any bids received after the stated time will be returned unopened.
- 2) School district personnel will be available to receive the bids on Tuesday, 28 April 2020, from 8am until 2pm local time. Signs will be posted at the main entrance directing bidders to the appropriate drop off location.
- 3) A public bid opening will be held immediately following the 2pm submission deadline, in the Board Room of the Marion Proffitt Training Center. Although the Appoquinimink School District is not prohibiting public presence at the bid opening, for the safety of the general public the State of Delaware guidelines for social distancing and public gatherings will be enforced. In an effort to reinforce recommended social distancing, the Appoquinimink School District strongly encourages attendees attend the bid opening via YouTube live stream at the following link:
 - a. Full link:

 $\underline{https://www.youtube.com/channel/UC7nnAUtcNQgymmVQCCNiaSg/videos?view_as=public}$

b. Abbreviated Link:

bit.ly/appoyoutube

c. Alternative Conference Call Line:

Number: +1 (646) 558 8656 Access Code: 333 990 692

d. A recording of the bid opening will remain available for future access at the link above.

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Note: Bid Documents obtained through the State of Delaware Government Support Services Website (bids.delaware.gov), are not for bidding purposes. Bid Documents may be viewed and downloaded at EDIS' FTP site. To obtain access to the FTP site, please submit your request via email to Jackie McKee at jmckee@ediscompany.com.

NOTICE: Attach this addendum to the project manual for this project. It modifies and becomes a part of the contract documents. Work or materials not specifically mentioned herein are to be described in the main body of the specifications and as shown on the drawings. Bidders shall acknowledge receipt of this addendum on the space provided on the Bid Form. Failure to do so may subject the bidder to disqualification.

Whenever this Addendum modifies a portion of the Project Manual added information is shown as **Bold** and deleted information is shown as **strikethrough**.

The contract documents for the above referenced project, dated February 21, 2020 are amended as follows:

GENERAL CLARIFICATIONS:

1. None

QUESTIONS AND ANSWERS:

1. See attached responses to RFI's – 1, 2, 4, 5, 7, 13, 15, 21, 22, 24, 27, 32, 33, 34, 35, 37, 38, 41, 42, 43, 46, 48, 52, & 53.

MODIFICATIONS TO SPECIFICATIONS:

1. TABLE OF CONTENTS

- a. ADD SECTION 013700 BIM COORDINATION to the list of Division 1 specifications on page 001110-1.
- **2.** <u>SECTION 004100 BID FORMS</u>: DELETE this section in its entirety and INSERT revised Section 004100, annotated Addendum No. 4. Changes include:
 - a. The Lump Sum Price for BIM Coordination was removed from the Base Bid for all contracts. This will be handled as Alternates for specific contracts.
 - b. The New Castle County Contractor's License was deleted from the list of attachments for all contracts. Contractors will be required to obtain a Town of Middletown Contractor's License before a contract is awarded.
 - c. A note was added to the bottom of the Subcontractor Lists for all contracts.
 - d. Contract A-01 Demolition
 - 1. Unit Price No. 12 added to the bid form.
 - e. Contract A-04 Masonry
 - 1. Unit Price No. 17 added to the bid form.
 - f. Contract A-05 Structural Steel & Misc. Metals
 - 1. Alternate No. 12 added to the bid form.
 - g. Contract A-22 Theater Rigging & Stage Curtains





- 1. Alternate No. 12 added to the bid form.
- h. Contract A-26 Fire Protection
 - 1. Alternate No. 12 added to the bid form.
- i. Contract A-27 Plumbing
 - 1. Alternate No. 12 added to the bid form.
- j. Contract A-28 Mechanical
 - 1. Alternate No. 12 added to the bid form.
- k. Contract A-30 Electrical
 - 1. Alternate No. 12 added to the bid form.

3. SECTION 011100 – SUMMARY OF WORK; make the following pen and ink changes:

- a. CONTRACT A-01 DEMOLITION
 - 1. DELETE scope item no. 6 and REPLACE with the following:

"6. All foundation walls, slabs-on-grade, footings, areaway walls, interior & exterior steps, interior and exterior ramps, slabs, vault walls, shop walls, yard walls, shall be demolished to elevation 45.0 and backfilled with satisfactory material. Compaction shall be in accordance with the Geotechnical Report. Backfill within the footprint of the demolished structures shall be brought to elevation 56.5"

b. CONTRACT A-02 SITEWORK

1. ADD the following specification to the list of Technical Specifications:

"Section 129300 Site Furnishings"

2. DELETE Section 129313 Bicycle Racks from the list of Technical Specifications.

c. CONTRACT A-03 CONCRETE

1. ADD the following specification to the list of Technical Specifications:

"Section 030506 Under-Slab Vapor Barrier"

- 2. DELETE Section 072616 Under-Slab Vapor Barrier/Retarder from the list of Technical Specifications.
- 3. DELETE scope item no. 10 on page 011100-19. The structural concrete panels are assigned to Contract A-07 Metal Studs & Drywall.

d. CONTRACT A-04 MASONRY

1. ADD the following specification to the list of Technical Specifications:

"Section 047200 Cast Stone Masonry"

e. CONTRACT A-05 STRUCTURAL STEEL & MISC METALS

1. ADD the following new scope item after scope item no. 42 on page 011100-28:

"43. Provide decorative metal railings."

f. CONTRACT A-06 CARPENTRY & GENERAL WORKS

1. ADD the following specification to the list of Technical Specifications:

"Section 122424 Electronic Roller Shade System"

- 2. DELETE Section 122413 Window Treatment Roller Shades from the list of Technical Specifications.
- 3. CHANGE scope item no. 30 to read:
 - "30. Provide electronic roller shade system."
- 4. CHANGE scope item no. 34 to read:
 - "34. Provide kilns and associated equipment, to include, portable clay containers, supply cart, and metal shelving. Supply downdraft exhaust system to mechanical contractor for installation."
- 5. DELETE scope item no. 35 on page 011100-32. The entrance mats and frames are assigned to Contract A-15 Carpet & VCT.
- 6. DELETE scope item no. 36 on page 011100-32. The residential appliances are being furnished by the owner. Commercial appliances are by Contract A-25 Kitchen Equipment.
- 7. ADD the following new scope items after scope item no. 59 on page 011100-33:
 - "60. Provide coat hooks, as specified in Section 062000, mounted on 1x10 (nominal) poplar backboard with beveled edges, painted to match adjacent surfaces.
 - 61. Provide adjustable shelving (shelves, brackets, standards). See key note 6 on A-112.
 - 62. Provide google cabinets as specified in Section 104400."

g. CONTRACT A-07 METAL STUDS & DRYWALL

1. DELETE scope item no. 38 on page 011100-37. This contractor does not have any BIM related work.

h. CONTRACT A-08 ROOFING & WATERPROOFING

- 1. DELETE scope item no. 29 on page 011100-40. This contractor does not have any BIM related work.
- i. CONTRACT A-09 EXTERIOR METAL PANELS





- 1. DELETE scope item no. 15 on page 011100-42. This contractor does not have any BIM related work.
- j. CONTRACT A-10 DOORS, FRAMES, AND HARDWARE SUPPLY
 - 1. DELETE scope item no. 12 on page 011100-44. This contractor does not have any BIM related work.

k. CONTRACT A-11 GLASS AND GLAZING

1. CHANGE the title of Technical Specification Section 084123 to read:

"Section 084123 Fire Rated Aluminum-Framed Storefronts"

2. ADD the following specification to the list of Technical Specifications

"Section 084126 All Glass Entrances"

- 3. DELETE Section 102310 Glazed Interior Wall and Door Assemblies from the list of Technical Specifications.
- 4. DELETE scope item no. 24 on page 011100-47. This contractor does not have any BIM related work.
- 5. ADD the following new scope item after scope item no. 27 on page 011100-47:
 - 28. Provide All-Glass entrance systems.

1. CONTRACT A-12 CASEWORK AND MILLWORK

1. DELETE scope item no. 15 on page 011100-49. This contractor does not have any BIM related work.

m. CONTRACT A-13: PAINT & WALLCOVERINGS

1. ADD the following specifications to the list of Technical Specifications

"Section 070553 Fire and Smoke Assembly Identifications Section 072129 Spray Acoustical Insulation Section 097200 Wall Coverings"

- 2. ADD the following new scope items after scope item no. 24 on page 011100-51:
 - "25. Provide spray acoustical insulation systems.
 - 26. Provide wall coverings."

n. CONTRACT A-14 ACOUSTICAL CEILINGS AND WALL PANELS

1. DELETE scope item no. 15 on page 011100-53. This contractor does not have any BIM related work.



o. CONTRACT A-15 CARPET & VCT

1. ADD the following specifications to the list of Technical Specifications

"Section 124813Entrance Floor Mats and Frames"

2. ADD the following new scope item after scope item no. 20 on page 011100-55:

"21.Provide entrance floor mats and frames."

p. CONTRACT A-17 TERRAZZO TILE

1. DELETE scope item no. 13 on page 011100-59. This contractor does not have any BIM related work.

q. CONTRACT NO. A-19 WOOD & ATHLETIC FLOORING

1. DELETE Section 096453 Stage Flooring from the list of Technical Specifications.

r. CONTRACT A-20 GYMNASIUM EQUIPMENT AND BLEACHERS

1. DELETE scope item no. 15 on page 011100-65. This contractor does not have any BIM related work.

s. CONTRACT A-21 THEATRICAL AUDIO/VISUAL EQUIPMENT

1. DELETE scope item no. 10 on page 011100-66. This contractor does not have any BIM related work.

t. CONTRACT A-22 THEATRICAL RIGGING & STAGE CURTAINS

1. CHANGE the title of Technical Specification Section 116133 to read:

"Section 116133 Rigging Systems and Draperies"

2. DELETE Section 116143 Theatrical Draperies from the list of Technical Specifications.

u. CONTRACT A-23 THEATER SEATING

1. DELETE scope item no. 8 on page 011100-70. This contractor does not have any BIM related work.

v. CONTRACT A-24 ELEVATORS

1. DELETE scope item no. 12 on page 011100-72. This contractor does not have any BIM related work.

w. CONTRACT A-25 KITCHEN EQUIPMENT

1. DELETE scope item no. 23 on page 011100-75. This contractor does not have any BIM related work.

x. CONTRACT A-26 FIRE PROTECTION





1. DELETE Section 15500 Fire Protections from the list of Technical Specifications.

y. CONTRACT A-29 BUILDING MANAGEMENT SYSTEMS

1. DELETE scope item no. 35 on page 011100-87. This contractor does not have any BIM related work.

z. CONTRACT A-30 ELECTRICAL

- 1. DELETE Section 102239 Folding Panel Paritions from the list of Technical Specifications.
- 2. DELETE scope item no. 5 and REPLACE with the following:
 - "5. The pad mounted transformer serving the building will be furnished and installed by the Town of Middletown. The new conduits and wiring from the overhead power lines on the north side of the site will also be provided by the Town of Middletown. The Electrical Contractor is responsible for the new conduits and wiring from the new transformer to the new distribution switchboard as shown on E-502."

aa. CONTRACT A-32 SPECIAL SYSTEMS

1. DELETE scope item no. 24 on page 011100-98. This contractor does not have any BIM related work.

4. <u>SECTION 012300 – ALTERNATES</u>

a. Add the following Alternate No. 12 to paragraph 3.C on page 012300-4:

"Alternate No. 12: Building Information Modeling in lieu of Traditional Coordinated Shop Drawings.

- 1. State in the Bid Form the amount to be added from the Base Bid amount for preparing the shop drawings using Revit modeling software and to participate in the BIM coordination process as described in Section 013700.
- 2. Base bid includes providing fully coordinated shop drawings through any means that the contractor normally prepares shop drawings (i.e. AutoCAD, Revit, etc.)"

5. SECTION 012200 - UNIT PRICES

- a. Add the following Unit Price No. 17 after Unit Price No. 16 on page 012200-2. This unit price is being added to the bid form for Contract A-04 Masonry.
 - "17. Price per brick to salvage and clean the existing bricks from the historic 1928 building exterior. The bricks shall be palletized and turned over to the Construction Manager."

6. <u>SECTION 034900 – GLASS-FIBER REINFORCED CONCRETE</u>

a. Page 034900-2, Article 1.06, Paragraph B: Delete Paragraph B.



7. SECTION 074213 - METAL WALL PANELS

a. Page 0874213-4, Article 2.01, Paragraph B:

Add subparagraph 3:

3. IMETCO Element Wall Panels: www.imetco.com.

8. SECTION 087100 - DOOR HARDWARE

- a. Page 087100-13, Article 3.8, Paragraph C:
 - 1. Add new Hardware Set 6.1:

Set: 6.1

Doors: E100J.A

Continuous Hinge CFM_HD1 PT - DOOR HEIGHT

Access Control Exit Device ED5200AN K157 MELR SELP10 IPS 24AD

(SELP10)

Cylinder (type to suit) 1080 (or) 3080 CT6R

Cylinder Core CR8027 CKC2

Door Pull BF158 Mtg-Type 12XHD

Surface Closer CPS7500

Kick Plate K1050 10" BEV

Threshold 279x224AFGT MSES25SS

Rain Guard 346C
Gasketing S773BL
Sweep 3452CNB
Frame Harness QC-C1500P

Door Harness QC-C__ - LENGTH TO SUIT

Electric Power Transfer EL-CEPT

Door Contact Switch BY SECURITY - PREP DOOR/FRAME

Lock Power BY SECURITY

Notes: Electronic Operation: Valid card or key retracts latchbolt. Free egress at all times. In case of power loss, door remains locked and latched.

- 2. Hardware Set 17.0: add two (2) Cylinder Cores CR8027 CKC2 630 RU.
- 3. Revise Hardware Set 24.0 to read:

Set: 24.0

Doors: 299A

2	Continuous Hinge	D329 - DOOR HEIGHT	630	RI
2	Recessed Exit	D3676	US32D	RI
2	Trim	D3080-02 *PASSAGE FUNCTION*	US32D	RI
2	Surface Closer	D-DCT-351PKT90	EN	RI
2	Surface Closer	D-DC-351P9	EN	RI
2	Kick Plate	D-KP 10" high SA	US32D	RI
2	Electromagnetic Holder	980M VOLTAGE/CURRENT TO SUIT	689	RF
1	Seal Kit	D-SS44-STK-DBZ	Dark Bronze	RI
1	Seal Kit	D-SS-STK-DBZ	Dark Bronze	RI

Notes: All hardware in this set is furnished by the door supplier under Section 081700 – Integrated Opening Assemblies.

Connect holder to fire alarm system to release upon fire alarm/lockdown event.

- 4. Hardware Set 27.0: Change Deadbolt quantity from three (3) to one (1)
- Hardware Set 30.0: Add Door 170B.
- 6. Hardware Set 32.0: Add Door 157C.
- 7. Hardware Set 34.1: add one (1) Cylinder.
- 8. Hardware Set 36.0: Delete Door 170B.

9. <u>SECTION 096500 – RESILIENT FLOORING</u>

- a. Page 965000-4, Article 2.03, Paragraph C: Add subparagraph 2:
 - "2. Basis of Design: Tarkett VIVCD-XX"
- b. Page 965000-5, Article 2.05, Add Paragraph D:
 - "D. LVT Transition Strips at Learning Stairs:
 - Product/Mfr: LVT 330/LVT 630 transitions as manufactured by Powerhold: www.powerhold.com
 - 2. Material/Finish: Etched Aluminum"



10. SECTION 102600 - WALL PROTECTION

a. Page 102600-3, Article 2.03, Paragraph C: Change to read:

"C. Protective Wall Covering (WPM-2):

- Material: Polyethylene terephthalate (PET or PETG); PVC and PBTs-free.
- 2. Thickness: 0.040 inch.
- Surface Burning Characteristics: Provide assemblies with flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with **ASTM**

E84.

- 4. Color: As selected from manufacturer's standard colors.
- Texture: Suede.
- Accessories: Provide manufacturer's standard color-matched trim and moldings. 6.
- 7. Mounting: Adhesive.
- 8. Basis of Design: Inpro Palladium"
- b. Page 102600-3, Article 2.03, Paragraph F:

Add Paragraph F:

- "F. Custom Digitally Printed Protective Wall Covering (WPM-1):
 - Material: Polyethylene terephthalate (PET or PETG); PVC and PBTs-free.
 - 2. Thickness: 0.040 inch.
 - 3. Surface Burning Characteristics: Provide assemblies with flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with **ASTM**

E84.

- Custom Digitally Printed Graphics: Artwork files as provided by Architect.
- Accessories: Provide manufacturer's standard color-matched trim and moldings.
- 6. Mounting: Adhesive.
- 7. Basis of Design: Inpro Aspex"

11. <u>SECTION 104400 – FIRE PROTECTION SPECIALTIES</u>

Page 104400-3, Article 2.07, Paragraph D: Add Paragraph D:

- "D. Goggle Cabinets:
 - Sellstrom Model 2000 Monitor Germicidal Goggle Cabinet
 - 2. Capacity: 35 goggles.
 - Description: Germicidal goggle monitor, designed to remove bacteria and prepare goggles for next use. Average kill rate: 99.2% at fve minutes.
 - a. UL Listed, 120v.
 - b. Provided with tamper resistant latches and lock
 - c. Germicidal lamp shall have a 20 year limited warranty

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- d. Five minute cycle controlled by timer
- e. Wall mounted with 7' cord"

12. SECTION 105100 - METAL LOCKERS

- a. Page 105100-1, Article 2.01, Paragraph A: Add subparagraph 5:
 - "5. List Industries: www.listindustries.com"

13. <u>SECTION 116133 – RIGGING SYSTEMS AND DRAPERIES</u>

- a. Page 116133-4, Article 2.01, Paragraph A: Add subparagraph 5:
 - "5. Janson Industries 1200 Garfield Avenue SW Canton, OH 44706 330.455.7029"

14. SECTION 123583 – SPECIALTY CASEWORK

- a. Page 123583-3, Article 2.03, Paragraph D: Add subparagraph 2:
 - "2. Provide individual compartment doors."
- b. Page 123583-3, Article 2.03, Paragraph E: Add subparagraph 2:
 - "2. Provide individual compartment doors."

15. SECTION 230600 - AIR DISTRIBUTION & ACCESSORIES - HVAC

a. Delete Section 230600, and replace with Section 230600, Revision 1, dated 4/17/2020, attached to this Addendum.

16. SECTION 274117 – SOUND, VIDEO, & COMMUNICATION SYSTEMS

a. Delete Section 274117, and replace with Section 274117, Revision 1, dated 4/10/2020, attached to this Addendum.

MODIFICATIONS TO DRAWINGS:

DRAWINGS – VOLUME 1:

- 1. <u>DRAWING C-502</u>: Delete Drawing C-502, and replace with Drawing C-502, Revision 1, dated 04/17/2020, attached to this Addendum.
- 1. <u>DRAWING A-002</u>: Delete Drawing A-002, and replace with Drawing A-002, Revision 1, dated 04/17/2020, attached to this Addendum.



- 2. <u>DRAWING A-131</u>: Delete Drawing A-131, and replace with Drawing A-131, Revision 2, dated 04/17/2020, attached to this Addendum.
- 3. <u>DRAWING A-404;</u>

Detail D4:

Delete Note: "Water Jet Cut

4. <u>DRAWING A-406:</u>

Detail D3:

In Locker 176, Delete Note: "REF STRUCT FOR PAD"

- 5. DRAWING A-421 Delete Drawing A-421, and replace with Drawing A-421, Revision 1, dated 04/17/2020, attached to this Addendum.
- 6. <u>DRAWING A-422</u> Delete Drawing A-422, and replace with Drawing A-422, Revision 1, dated 04/17/2020, attached to this Addendum.
- 7. DRAWING A-441 Delete Drawing A-441, and replace with Drawing A-441, Revision 1, dated 04/17/2020, attached to this Addendum.
- 8. DRAWING A-444 Delete Drawing A-444, and replace with Drawing A-444, Revision 1, dated 04/17/2020, attached to this Addendum.
- 9. DRAWING A-445 Delete Drawing A-445, and replace with Drawing A-445, Revision 2, dated 04/17/2020, attached to this Addendum.
- 10. DRAWING A-601 Delete Drawing A-601, and replace with Drawing A-601, Revision 1, dated 04/17/2020, attached to this Addendum.
- 11. DRAWING A-602 Delete Drawing A-602, and replace with Drawing A-602, Revision 1, dated 04/17/2020, attached to this Addendum.

DRAWINGS - VOLUME 2:

- 1. <u>DRAWING I-001</u>: Delete Drawing I-001, and replace with Drawing I-001, Revision 1, dated 04/17/2020, attached to this Addendum.
- 2. <u>DRAWING I-111</u>: Delete Drawing I-111, and replace with Drawing I-111, Revision 1, dated 04/17/2020, attached to this Addendum.
- 3. <u>DRAWING I-112</u>: Delete Drawing I-112, and replace with Drawing I-112, Revision 1, dated 04/17/2020, attached to this Addendum.
- 4. DRAWING I-115: Delete Drawing I-115, and replace with Drawing I-115, Revision 1, dated 04/17/2020, attached to this Addendum.
- 5. <u>DRAWING I-121</u>: Delete Drawing I-112, and replace with Drawing I-112, Revision 1, dated 04/17/2020, attached to this Addendum.
- 6. DRAWING I-122: Delete Drawing I-122, and replace with Drawing I-122, Revision 1, dated 04/17/2020, attached to this Addendum.
- 7. <u>DRAWING I-601</u>: Delete Drawing I-601, and replace with Drawing I-601, Revision 2, dated 04/17/2020, attached to this Addendum.
- 8. DRAWING P-502: Delete Drawing P-502, and replace with Drawing P-502, Revision 1, dated 04/17/2020, attached to this Addendum:
 - a. MODIFY grease interceptor detail for concrete encasing.
- 9. DRAWING P-601: Delete Drawing P-601, and replace with Drawing P-601, Revision 1, dated 04/17/2020, attached to this Addendum:
 - a. MODIFY schedule for Lavatory and Grease interceptor.





- 10. <u>DRAWING M-603</u>: Delete Drawing M-603, and replace with Drawing M-603, Revision 1, dated 04/17/2020, attached to this Addendum:
 - a. LOUVER SCHEDULE REVISE model number to 'EFD-637'.
- 11. <u>DRAWING E-135</u>: Delete Drawing E-135, and replace with Drawing E-135, Revision 1, dated 04/17/2020, attached to this Addendum:
 - a. MOVE panel "LP-1", "RP-1" and "MP-1". Refer to attached drawing E-135.
 - b. ADD sub-distribution panel "SDP". Refer to attached drawing E-135.
- 12. <u>DRAWING E-502</u>: Delete Drawing E-502, and replace with Drawing E-502, Revision 1, dated 04/17/2020, attached to this Addendum:
 - a. ADD panel "KP-1", KP-2", "KP-1" and "MP-1" to Single Line Distribution Diagram. Refer to attached drawing E-502.
- 13. <u>DRAWING E-601</u>: Delete Drawing E-601, and replace with Drawing E-601, Revision 1, dated 04/10/2020, attached to this Addendum:
 - a. ADD equals to light fixture schedule. Refer to attached drawing E-601.
- 14. <u>DRAWING E-606</u>: Add Drawing E-606, Revision 0, dated 04/17/2020, attached to this Addendum:
 - a. ADD panel schedules for panel "PB-101S", "PB-102IG", "PB-103S" and "PB-104S". Refer to attached drawing E-606.

LIST OF ATTACHMENTS:

RFI'S

RFI's - 1, 2, 4, 5, 7, 13, 15, 21, 22, 24, 27, 32, 33, 34, 35, 37, 38, 41, 42, 43, 46, 48, 52, & 53.

SPECIFICATIONS:

SECTION 230600 - AIR DISTRIBUTION & ACCESSORIES – HVAC SECTION 274117 - SOUND, VIDEO, & COMMUNICATION SYSTEMS

DRAWINGS – VOLUME 1:

C-502 – SITE CONSTRUCTION DETAILS

- A-002 EXTERIOR BUILDING ASSEMBLIES
- A-131 OVERALL ROOF PLAN
- A-421 ENLARGED TOILET ROOM PLANS
- A-422 ENLARGED TOILET ROOM PLANS
- A-441 CASEWORK ELEVATIONS FIRST LEVEL A
- A-444 CASEWORK ELEVATIONS SECOND LEVEL A
- A-445 CASEWORK ELEVATIONS SECOND LEVEL B
- A-601 DOOR SCHEDULE
- A-602 DOOR SCHEDULE

DRAWINGS - VOLUME 2:

- I-001 FINISH LEGEND AND NOTES
- I-111 FIRST FLOOR FINISH PLAN AREA 'A'
- I-112 FIRST FLOOR FINISH PLAN AREA 'B'

- I-115 FIRST FLOOR FINISH PLAN AREA 'E'
- I-121 SECOND FLOOR FINISH PLAN AREA 'A'
- I-122 SECOND FLOOR FINISH PLAN AREA 'B'
- I-601 FINISH SCHEDULE
- E-135 FIRST FLOOR POWER PLAN AREA 'E'
- E-502 DETAILS ELECTRICAL
- E-601 SCHEDULES ELECTRICAL
- E-606 PANEL SCHEDULES
- P-502 DETAILS PLUMBING
- P-601 LEGENDS & SCHEDULES PLUMBING

End of Addendum No. 4



TO:	SETH HAMN	<u>IONDS, ABHA</u>	<u>—</u>	PRE-BID RFI#:	001	
FROM:	ANDREW H	CKEY, EDIS COMPANY	DA	ATE: <u>23 MARCH</u>	2020	
PROJECT: <u>EV</u>	ERETT MERED	OITH MIDDLE SCHOOL	<u> </u>			
DWG. # / DET	AIL:	SPEC. SECTIONS:	002113-6, 0137	00 PAGE:		
REQUEST:						
Submitted By:	Thompson	& Sons	Date: 23 Mai	rch 2020		
specif 2.) Section	fications for th	nary of Work states to p is. te #5 refers to spec sect				
1.a The decora 1.b The bike ra 1.c The exterio 1.d The flagpo 1.e The manua	ncks are detailed or basketball hoo les are specified al swing arm ga and double egre	nd steel pipe bollards are I on C501. ops are specified in Sectio I in Section 107500 tes are detailed on C502 ess gates that are shown o	n 116625.		specified ir	ı
2. Specification	n Section 013700) will be issued by Adden	dum.			
Response By:	EDiS	Company	Date:	14 Ap	r 20	



TO:	SETH HAMMONDS, ABHA	PRE-BID RF1#:002_
FROM:	ANDREW HICKEY, EDIS COMPANY	DATE: 23 MARCH 2020
PROJECT: <u>EV</u>	ERETT MEREDITH MIDDLE SCHOOL	_
DWG. # / DET	AIL:SPEC. SECTIONS:	_274117PAGE:
REQUEST:		
Submitted By:	CTSI Date: 23 Mar	<u>ch 2020</u>
allow the st specifications 2.) Pleas being	ec section 274117, part 1.05 Bid Require ed to furnish/install the material in thi ate of DE for low voltage systems in K fication? e confirm if pa/intercom systems and/o bid within this contract? If so, are speings? Please advise.	is section. CTSI is an approved supplier in I-12 facilities. Can we be added to the or any other low voltage systems are
RESPONSE:		
· · · · · · · · · · · · · · · · · · ·	is approved. See Section 274117 attack atercom is by the Special Systems Cont	
Response By:	Scott Lester, ABHA	Date: <u>17 April 2020</u>



TO:	SETH HAMMONDS, ABHA	PRE-BID RFI#:004
FROM:	ANDREW HICKEY, EDIS COMPANY	DATE: <u>23 MARCH 2020</u>
PROJECT: EV	ERETT MEREDITH MIDDLE SCHOOL	_
DWG. # / DETA	AIL:SPEC. SECTIONS:	PAGE:
REQUEST:		
Submitted By:	EDiS Company	Date: <u>23 March 2020</u>
•	·	CB's? Is the existing elevator hydraulic or re there PCB's in the hydraulic fluids?
RESPONSE:		
the To transfe compa	wn of Middletown. The Town will bormers. 2. The elevators are hydrauli	n the late 90's. The transformers belong to e responsible for removing the c. The owner's environmental testing b's existing they will be removed by the
Response By:	ASD / ETI	Date: <u>17 April 2020</u>



TO:	SETH HAMMONDS, ABHA	PRE-BID RFI#: 005
FROM:	ANDREW HICKEY, EDIS COMPANY	DATE: 23 MARCH 2020
PROJEC	CT: EVERETT MEREDITH MIDDLE SCHOOL	
DWG. #	# / DETAIL:SPEC. SECTIONS:	PAGE:
REQUI	EST:	
Submit	ted By: <u>EDiS Company</u>	Date: 23 March 2020
2.)	Do the basement foundations need to be remremoved to an elevation 1' below the lowest Does the slab on grade in the basement have in the slab and the slab left in place? Can the demolished concrete can be used as Also, if allowed to crush the concrete on site quality permit and associated testing?	footing? to be removed or can holes be punched backfill?
RESPO	DNSE:	
1.)	All foundations will be completely removed walls, footers, or slabs below elevation 45.00 remain.	
2.)	Acceptable to break up the basement slab an 3.01E.	d leave in place per Section 024100
3.)	The material can be broken down and procedure borrow gradation, then it is an acceptable mais attached.	
4.)	The Demolition Contractor will be responsible and associated testing.	ele for obtaining the air quality permit
Respon	use By: Scott Lester, ABHA & Alison S	Schoch Date: <u>17 April 2020</u>

BORROW SECTION 1001

SECTION 1001 – BORROW

1001.01 Material Requirements.

Use classification, characteristics, and definitions of terms for borrow according to requirements of:

AASHTO M57

AASHTO M145

AASHTO M146

AASHTO M147

Material must have:

Maximum dry weight ≥ 90 pounds per cubic feet

Liquid Limit ≤ 40

No frozen material, rubbish, boulders in excess of 6 inches, or organics

Types and requirements in addition to above:

Table 1001-1: Dry Weight Percent Passing Square Mesh Sieves for Borrow Types

	Type A	Type B (special fill)	Type C (Backfill)	Type D (Cement Stabilization)	Type F (Common Borrow)
3"		100%		100%	Must meet
2-1/2"	95 – 100%				general requirements
1"			85 – 100%		listed in the
No. 200	Max 35%	Max 10%	Max 25%	8 – 30%	paragraph above



FROM: ANDREW HICKEY, EDIS COMPANY DATE: 24 MARCH 2 PROJECT: EVERETT MEREDITH MIDDLE SCHOOL	<u>020</u>
PROJECT: EVERETT MEREDITH MIDDLE SCHOOL	
DWG. # / DETAIL:SPEC. SECTIONS:PAGE:	
REQUEST:	
Submitted By: Thompson & Sons Date: 24 March 2020	
 Can the existing paving be milled and used as base for the new paved area Can the existing stone aggregate under the existing paving be reused for bethe new paving? 	
RESPONSE:	
 We recommend against using milled asphalt for reuse in lieu of traditional materials for base in new pavement areas. Even if the asphalt millings are to an appropriate gradation, they generally are more flexible under loading therefore do not have the same structural and drainage properties as GAB The existing stone aggregate can be reused under new paving areas, proving material appears to be free of organics, debris, and rock fragments larger trinches. 	processed g and C. ded the
Response By: Alison Schoch, Duffield Associates Date: 09 Apri	1 2020



TO: SETH HA	MMONDS, ABHA	_	PRE-BID RFI#: 013
FROM: A	NDREW HICKEY, EDIS COMPANY	_	DATE: <u>26 MARCH 2020</u>
PROJECT: <u>EVER</u>	ETT MEREDITH MIDDLE SCHOOL	_	
DWG. # / DETAII	.:SPEC. SECTIONS:		PAGE:
REQUEST:			
Submitted By:	Unified Door & Hardware	Date:	26 March 2020

- 1.) Hollow metal spec missing info for exterior doors.
- 2.) Hollow metal spec only has core listed for interior fire doors.
- 3.) Door 299A is type EE (recessed panic) but has set 24.0 (surface rim panic). Either change door type or correct set 24.
- 4.) Door E100J.A is hollow metal but has set 6.0. Set 6 states perimeter gasketing by door manufacture. Frame is standard hollow metal.
- 5.) Door 174.B is type AA (flush pair) and has HM for frame material but has STL for door material. Should door material be changed to HM? If not, what is this door?
- 6.) Door 173 is type EE (recessed panic) but has set 30 which is lock and flush bolts. Either change door type or correct set 30.
- 7.) Door 124A is type EE (recessed panic) but has set 31 which is lock and flush bolts. Either change door type or correct set 31.
- 8.) Door 157C has det 32 per door schedule but is not listed in spec set 32. Is this correct set?
- 9.) Door 170.B is pair but has set 36. Set 36 is for single door. Should this door have set 30?
- 10.)Both pairs of doors in set 46 are 7'-0" but set 46 has 8 hinges not 6. Should quantity be changed to 6?
- 11.) Set 17 has cylinder but is missing cylinder core.
- 12.) Set 27 has 1 electric lock, 3 double cylinder deadbolts and 2 cores. Please fix this set.
- 13.) Set 34.1 missing cylinder.



RESPONSE:

- 1.) See Addendum No. 2. Note that exterior hollow metal door is fire-rated.
- 2.) See Addendum No. 2
- 3.) Door Type is EE. Hardware set 24.0 updated. See Addendum #4
- 4.) Frame and door types are correct. Hardware set updated to Type 6.1. See Addendum #4
- 5.) The door material is HM hollow metal. See Addendum #4
- 6.) The door type is AA. See Addendum #4
- 7.) The door type is AA. See Addendum #4
- 8.) Set 32 is correct. See Addendum #4
- 9.) Set 30 is correct. Hardware Set 30.0: Add Door 170B. See Addendum No 4.
- 10.) Provide quantity as defined in PART 2 of the specification
- 11.) Add two cores to set 17.0. See Addendum No 4.
- 12.) Change deadbolt quantity from three to one See Addendum No 4.
- 13.) Add one cylinder to set 34.1 See Addendum No 4.

Response By: _	Scott Lester, ABHA	Date: <u>17 April 2020</u>	
1 , –		<u> </u>	



TO:	EDIS COMPANY	PRE-BI	D RFI#:	015_
FROM:	ANDREW HICKEY, EDIS COMP	<u>ANY</u> DA	TE: <u>26 MARC</u>	<u>CH 2020</u>
PROJECT: <u>EVI</u>	ERETT MEREDITH MIDDLE SCH	OOL_		
DWG. # / DETA	AIL:SPEC. SECTIONS	S:P	PAGE:	
REQUEST:				
Submitted By:	Brandywine Contractors	Date: _	26 March 20	20
there i	rpentry scope item 36 calls for 1 s a kitchen equipment prime co try package?			
RESPONSE:				
	em will be deleted by addendum. Inmercial appliances are by Contrac		_	furnished by
Response By:	Chris McCone	Date:	4/14/2020	



TO: SETH HAMMONDS, ABHA	PRE-BID RFI#: <u>021</u>
FROM: NARISSA BUILDING COMPANY	DATE: 31 MARCH 2020
PROJECT: EVERETT MEREDITH MIDDLE SCHO	OOL_
DWG. # / DETAIL:SPEC. SECTIONS	:PAGE:
REQUEST:	
Submitted By: <u>EDiS Company</u>	Date: <u>30 March 2020</u>
how the wall is being supported? Need wall so overhead door. 2) Is shop drawings required for division 7 co	are supplied by contract No. 9 and installed by ling flashing, wall ties, anchors, caulking to be
RESPONSE:	
	rements. ponsible to "Provide" the Z furring to support de" is defined as furnish and install. Contract ding their anchors, flashings, wall ties,
Response By: ABHA & EDiS Company	Date: <u>17 Apr 20</u>



TO: SETH HAMMONDS, ABHA	PRE-BID RFI#:022_
FROM: ANDREW HICKEY, EDIS COMPANY	DATE: 31 MARCH 2020
PROJECT: EVERETT MEREDITH MIDDLE SCHOOL	-
DWG. # / DETAIL:SPEC. SECTIONS:	PAGE:
REQUEST:	
Submitted By: <u>Brandywine Contractors</u>	Date: 31 March 2020
1.) We received our first quote on the GFRC from manufacturers. Their factory is not certified spec calls for (034900.1.06.B) but they meet a we keep running into with millwork and the be certified be deleted?	by the Precast Concrete Institute like the all PCI standards. This is similar to what
RESPONSE:	
1.) Requirement can be deleted. See Addendur	m No 4.
Response By: Scott Lester, ABHA	Date:17



TO: SETH HAN	MMONDS, ABHA	PRE-BID RFI#: 024
FROM: AN	NDREW HICKEY, EDIS COMPANY	DATE: 31 MARCH 2020
PROJECT: <u>EVERE</u>	TT MEREDITH MIDDLE SCHOOL	-
DWG. # / DETAIL:	SPEC. SECTIONS:	PAGE:
REQUEST:		
Submitted By:	C.T.A. Roofing and Waterproofing Inc	c. Date: 31 March 2020
,	is the substitution request form for nformation for the Metal Wall Pane	r IMETCO Metal Wall Panel and the el Contract on EMMS is in the link
RESPONSE:		
1.) Approved	I. See Addendum No 4.	
Response By:	Scott Lester, ABHA	Date:17 April 2020



TO: SETH HAMMONDS, ABHA	PRE-BID RFI#: <u>027</u>
FROM: ANDREW HICKEY, EDIS COMPANY	DATE: <u>02 APRIL 2020</u>
PROJECT: EVERETT MEREDITH MIDDLE SCHOOL	
DWG. # / DETAIL:SPEC. SECTIONS: 0984	PAGE:
REQUEST:	
Submitted By: KBA	Date: <u>02 April 2020</u>
1) Substitution Request: I am looking to start from Essi Acoustical. Please see attachments.	the process of substitutions for 09-8400
RESPONSE:	
1) The Sky Acoustics Stratus product does no the specification and is not acceptable.	ot meet the NRC-0.95 rating required by
Response By: Scott Lester / ABHA	Date:17



TO: SETH HAMMON	NDS, ABHA	PRE-BID RFI#:032_	
FROM: ANDRE	W HICKEY, EDIS COMPANY	DATE: <u>02 APRIL 2020</u>	
PROJECT: EVERETT ME	EREDITH MIDDLE SCHOOL		
DWG. # / DETAIL:	SPEC. SECTIONS:	PAGE:	
REQUEST:			
Submitted By: Penn	Lighting Associates	Date: <u>02 April 2020</u>	
project? The w	ay the specifications are wr	est for a few of the light fixtures on this ritten right now, only one (1) manufacture these types. Submittals for pre-approval	r!
RESPONSE:			
1.) See Drawing E-	601 in Addendum No 4.		
Response By:	Scott Lester, ABHA	Date: <u>17 April 2020</u>	



TO: SETH HAMMON	IDS, ABHA	PRE-BID RFI#:033_		
FROM: ANDREV	V HICKEY, EDIS COMPA	NY DATE: 02 APRIL 2020		
PROJECT: EVERETT ME	REDITH MIDDLE SCHOO	<u>OL</u>		
DWG. # / DETAIL:	SPEC. SECTIONS:	PAGE:		
REQUEST:				
Submitted By: Advar	ntech, Inc.	Date: <u>02 April 2020</u>		
1.) Substitution request: for the wireless clock system. We'd like to propose a Valcom system instead of the spec'd Primex system. Please see attached.				
RESPONSE:				
1.) The wireless clock system is to be provided by Contract A-32 Special Systems. This contract is sole sourced to Johnson Controls Inc.				
Response By:	EDiS Company	Date: <u>17 April 2020</u>		



TO: SETH HAMMO	NDS, ABHA		PRE-BID RFI#:034_	
FROM: ANDRE	W HICKEY, EDIS COMPANY	_ D	ATE: <u>03 APRIL 2020</u>	
PROJECT: <u>EVERETT M</u>	EREDITH MIDDLE SCHOOL	_		
DWG. # / DETAIL:	SPEC. SECTIONS:	274117	_PAGE:	
REQUEST:				
Submitted By: Brand	dywine Electronics	Date: <u>03 A</u>	pril 2020	
1.) Further information is needed in the 274117 Specification On Page 18 of that section Part 2 ends abruptly at the 2.02 subheader. This section is needed to confirm the products that need to be priced into our bid. Can that section be provided?				
RESPONSE:				
1.) See corrected S	Section 274117 included with	ı Addendum I	No 4.	
Response By:	Scott Lester, ABHA	Date:	17 April 2020	



TO: SETH HAMN	MONDS, ABHA	_	PRE-BID RFI#:	035
FROM: AND	REW HICKEY, EDIS COMPANY	_ D	ATE: <u>06 APRIL 2020</u>	
PROJECT: EVERETT	MEREDITH MIDDLE SCHOOL	_		
DWG. # / DETAIL:	SPEC. SECTIONS:	116133	PAGE:	
REQUEST:				
Submitted By: <u>Jar</u>	nson Industries	Date: <u>06 Ap</u>	oril 2020	
would like t 2.01.We are	stries is wanting to bid the Eve o be listed as an acceptable Cor bidding everything per specs. A or, our current and pending cros	ntractor per Se Attached to th	ction 116133 Parag is email is our appi	raph roval
RESPONSE:				
1.) Approved.	See Addendum No 4.			
Response By:	Scott Lester, ABHA	Date:	17 April 2020	



TO: SETH HAMMONDS, ABHA	PRE-BID RFI#: <u>037</u>
FROM: ANDREW HICKEY, EDIS COMPANY	DATE: <u>07 APRIL 2020</u>
PROJECT: EVERETT MEREDITH MIDDLE SCHOOL	-
DWG. # / DETAIL:SPEC. SECTIONS:	105100 PAGE:
REQUEST:	
Submitted By: <u>Brandywine Contractors</u>	Date: <u>07 April 2020</u>
1.) Substitution Request: 105100 Metal Lockers.	. Please see attached.
RESPONSE:	
1.) Approved. See Addendum No 4.	
Response By: Scott Lester, ABHA	Date:17 April 2020



TO: SETH HAMMONDS, ABHA	PRE-BID RFI#:038
FROM: ANDREW HICKEY, EDIS	COMPANY DATE: 08 APRIL 2020
PROJECT: EVERETT MEREDITH MIDDL	E SCHOOL
DWG. # / DETAIL:SPEC. SEC	CTIONS:PAGE:
REQUEST:	
Submitted By: Nickle Electric	Date: <u>08 April 2020</u>
	a part of the current EC bid pack? If so, please
	lighting drawing along with any details.
	and install the utility transformer that is to feed the lible for this, please provide a location and
transformer details.	bie for units, preute provide a foculton una
3.) Will the EC be responsible for a	ll work associated with the primary wiring (i.e.
pulling and terminations of me	dium voltage cables)?
RESPONSE:	
	ghting is part of Contract A-30 Electrical. See scope ork on drawings C110, C111, C112, C113, and ME-
171.	
•	serving the building will be furnished and installed
•	ne new conduits and wiring from the overhead power
	e will also be provided by the Town of Middletown. consible for the new conduits and wiring from the
	tribution switchboard as shown on E-502.
	ponsible for all primary wiring from the service to
the pad mounted transformer.	The Electrical Contractor is responsible for the wiring
from the pad mounted transfor	mer to the building.
Response By: EDiS Compan	Date:17 April 2020



TO: SETH HAMMONDS, ABHA		PRE-BID RFI#:	041
FROM: ANDREW HICKEY, EDIS CO	MPANY	DATE: <u>13 APRIL 2020</u>	
PROJECT: EVERETT MEREDITH MIDDLE S	CHOOL		
DWG. # / DETAIL:SPEC. SECTI	DNS: 230400	PAGE:	
REQUEST:			
Submitted By: <u>UEP Northeast</u>	Date:	13 April 2020	
 Request for Camus to be added as Boilers, Specifications Section 2304 Products, 2.2 G Camus DynaForce is very similar of this project. Please see attached 	00 – Heating Geno	eration Equipment, Part ign and meets the desigr	2 n intent
specific Camas DynaForce model	or this project.		
RESPONSE:			
1.) Camus DynaForce is not accepted	as a substitute.		
Response By: Scott Lester, ABH	<u> </u>	e: <u>15 April 2020</u>	



TO: SETH HAMMONDS, ABHA	PRE-BID RFI#: 042			
FROM: ANDREW HICKEY, EDIS COMPANY	DATE: <u>13 APRIL 2020</u>			
PROJECT: EVERETT MEREDITH MIDDLE SCHOOL				
DWG. # / DETAIL:SPEC. SECTIONS:	PAGE:			
REQUEST:				
Submitted By: <u>Creative Flooring</u>	Date: <u>13 April 2020</u>			
 Please provide detail of transitions/nosings in Auditorium from aisle to under fixed seating. Drawing A406 detail A1 shows full capture metal edge on platform boxes. Who is responsible for this? Provide spec for material. Please clarify flooring finish on Stair landings. Keynote 40 states RFT-1 where RST-1 and RR-1 are used, however finish plans show VCT at 199B, 199C & 299A and TRF-1 at 199A. Nothing is called out at 299B or 299C. 				
RESPONSE:				
1.) See updated sheets I-001, I-115, and I-601 inc 2.) See specification in Section 096500 and Adde 3.) See updated sheets I-111, I-112, I-121, I-122 in Response By: Scott Lester, ABHA	endum No 4. ncluded in Addendum 4.			



TO: EDIS, LANDMA	ARK		PRE-BID RFI#:	043
FROM: ANDRE	W HICKEY, EDIS COMP	'ANY	DATE: <u>14 APR</u>	<u>IL 2020</u>
PROJECT: <u>EVERETT M</u>	EREDITH MIDDLE SCH	OOL_		
DWG. # / DETAIL:	SPEC. SECTIONS	S:	PAGE:	
REQUEST:				
Submitted By: <u>Reyb</u>	old Construction		Date: 14 April 20	020
 Which contractor is responsible for the cast iron downspout boots? Which contractor is responsible for backfilling the basement demolition item shown on sheet C100? What work is to occur to the pavement on Broad St. The entrance plans show the pavement grayed out but do not state what is to be done. Is there a 2" mill and overlay or something else? 				
RESPONSE:				
1.) There are no ca #8.	ast iron downspout boo	ots. These we	re deleted per the	response to RFI
2.) The Demolition Contractor is responsible for backfilling the holes created by the removal of the foundations.				
3.) 2" mill and over	erlay.			
Response By:	EDiS, Landmark	Date:	15 April 2020	



TO: EDIS COMPANY	PRE-BID RFI#:046_
FROM: ANDREW HICKEY, EDIS COMPANY	DATE: <u>14 APRIL 2020</u>
PROJECT: EVERETT MEREDITH MIDDLE SCHOOL	
DWG. # / DETAIL:SPEC. SECTIONS:	PAGE:
REQUEST:	
Submitted By: <u>Tudor Electric</u> Date	: <u>14 April 2020</u>
1.) Is there a "site electric" drawing showing lighting	g and or power?
RESPONSE:	
1.) Yes. See drawings C110, C111, C112, C113, and M	ИЕ-171
Response By: <u>EDiS Company</u> Date:	14 April 2020



TO: SETH HAMMO	ONDS, ABHA]	PRE-BID RFI#:	048
FROM: ANDR	EW HICKEY, EDIS C	OMPANY	DA	TE: <u>14 APRIL 2020</u>	
PROJECT: EVERETT N	MEREDITH MIDDLE	SCHOOL			
DWG. # / DETAIL:	A-404, S-113 SPE	C. SECTIONS:_		PAGE:	
REQUEST:					
Submitted By: <u>EDi</u>	S Company	Dat	te: <u>14 Apr</u>	il 2020	
	ocker Room has a n id shown on S-113. l				yer.
RESPONSE:					
1.) Delete note. I	No special pad is red	quired.			
Response By:	Scott Lester, ABI	łА	_Date:	17 April 2020	



TO: SETH HAMM	ONDS, ABHA]	PRE-BID RFI#:	052
FROM: AND	REW HICKEY, EDIS COMPAN	Y DA	ΓΕ: <u>16 APRIL 2020</u>	
PROJECT: <u>EVERETT 1</u>	MEREDITH MIDDLE SCHOOL	<u>. </u>		
DWG. # / DETAIL:	I 001 SPEC. SECTIONS:	P.	AGE:	
REQUEST:				
Submitted By: Sto	nehard Date	: <u>16 April 2020</u>	_	
Resinous Flo	tt School there is an alternate ors or RF # 1. Reference Drav at about Locker Rooms and	ving I 001. Does t	hat mean just Toil	et
RESPONSE:				
•	for tile floor in lieu of resind the larger Boys and Girls G		•	s. It
Response By:	Scott Lester, ABHA	Date:	17 April 2020	



TO: SETH HAMMONI]	PRE-BID RFI#:	053	
FROM: ANDREW HICKEY, EDIS COMPANY DATE: 16 APRIL 2020				
PROJECT: EVERETT MER	REDITH MIDDLE SCHOOL			
DWG. # / DETAIL:	SPEC. SECTIONS:	P.	AGE:	
REQUEST:				
Submitted By: D. Shin	n Date:	16 April 2020	_	
1.) Am I correct in so sloped?	eeing the auditorium roof d	eck as the only	one NOT structi	ırally
RESPONSE:				
1.) See A-131 issued	with Addendum No 4 for c	larification.		
Response By:	Scott Lester, ABHA	Date:	17 April 2020	

	Contract: A-01:	Demolition		
	BID FO	<u>PRM</u>		
For Bids Due:	To:		mink School Di Exth Street 19730	
Name of Bidder:				
Bidder Address:				
Contact Name:		E-Mail Add	lress:	
Delaware Business License No.:		Taxpayer II	O No.:	
(Other License Nos.):(A copy of Bidder's Delaware Business License	must be attached	to this form.)		
Phone No.: ()		Fax No.: ()	
The undersigned, representing that he has reaccordance therewith, that he has visited the work is to be performed, and that his bid is be Documents without exception, hereby propostransport and other facilities required to execute itemized below:	site and has famil ased upon the ma ses and agrees to J	iarized himsel iterials, systen provide all lab	If with the local ons and equipment or, materials, pl	conditions under which the nt described in the Bidding ant, equipment, supplies,
1. LUMP SUM PRICE FOR THE CON	TRACT WORK		\$	
2. LUMP SUM PRICE FOR BIM COOL	RDINATION			
TOTAL BASE BID AMOUNT \$			(\$	Ŋ
(TOTAL AMOUNT IN WRITTEN V	VORDS)		(AMOUNT	ΓIN DOLLARS & CENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 9: Salvage and re-use 2nd floor east exterior stone window surround

Add/Deduct _____

Alternate No. 10: Salvage, clean, and re-install e	xisting brick at cer	nter bay of Histo	ory Wall	
Add/Deduct			(\$)
Alternate No. 11: Salvage, clean, and re-install e	xisting brick at for	ır (4) bays of Hi	story Wall	
Add/Deduct			(\$)
<u>UNIT PRICES:</u>				
Unit prices conform to applicable project specific following Unit Prices:	ation section. Refe	er to the specific	ations for a complete	description of the
	<u>BUL</u> <u>Add</u>	LK <u>Deduct</u>	TRENC Add	<u>H</u> <u>Deduct</u>
12. Price per cubic yard to undercut building subgrade and backfill with structural fill material. Spoils to be placed on site. (ADDENDUM NO. 4)	c/y	c/y	c/ <u>y</u>	<u>c/y</u>
NOTE: The difference in price between Add and (15%).	d Deduct in the ab	ove Unit Prices	should not exceed fi	fteen percent
I/We acknowledge Addendums numberedcost/schedule impact they may have.			and the price(s) subn	nitted include any
This bid shall remain valid and cannot be withdr shall abide by the Bid Security forfeiture provision	•	•		d the undersigned
The Owner shall have the right to reject any or al	l bids, and to waiv	ve any informal	ty or irregularity in a	any bid received.
This bid is based upon work being accomplished	by the Sub-Contra	actors named or	n the list attached to	this bid.
The undersigned represents and warrants that he	e has complied and	d shall comply v	with all requirements	s of local, state, and

national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free

competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

7	Trading as
(Individual's / General Partner's / Corporate Name))
(State of Corporation)	
iness Address:	
tness:	Ву:
	(Authorized Signature)
ΕΔΙ)	
SEAL)	(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Demolition			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract:</i> A	-01: Demolition have been thoroughly examined and are understo	od.
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE (TYPED):		
AUTHORIZED REPRESENTATIVE (SIGNATURE):		
TITLE:		
ADDRESS OF BIDDER:		
PHONE NUMBER:		
Sworn to and Subscribed before me this	day of20	
My Commission expires	NOTARY PUBLIC	<u>.</u>

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, le	gally authorized to do business in the State	of Delaware
('State"), are held and firmly unt	o the Appoquinimink Schoo	ol District in the sum of	
Dollars (S)	, or percent not to exceed	on Contract No to l	
Dollars (S) of amount of bid	on Contract No to l	be paid to the
		e Appoquinimink School District for which	
•		ur heirs, executors, administrators, and suc	cessors, jointly
and severally for and in the who	e firmly by these presents.		
NOM THE COMPLETON OF TH			1 '0 1 0
		nat if the above bounden Principal who has	
		of certain material and/or services within the	
	•	ly enter into and execute this Contract as ma	
		mink School District this Contract to be er	
		d thereof in accordance with the terms of sa	id proposal,
then this obligation shall be void	or else to be and remain in fu	ill force and virtue.	
Spaled with spal an	d dated this day of	in the year of our Lord t	two thousand
and(20_)	ni the year of our bord to	.wo thousand
(20_	/·		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nan	ne of Bidder (Organization)	
Camanala	D		
Corporate Seal	By:	a a livera	
	Authorized Sign	nature	
Attest	Title		
	Title		
	Name of Surety		
Witness	rame of Surety		
			
	Title		<u></u>

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, the	e
	(Surety Company's Address)
a Suret	ty Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awai	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Contractor/Subcontractor Address:		
Authorized Representative (typed or pr	rinted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this	day of	20
My Commission expires	NOTARY PUBLIC	<u>.</u>

Contract: A-02: Sitework BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - ____ Fax No.: (Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum

ALTERNATES

1. LUMP SUM PRICE FOR THE CONTRACT WORK

(TOTAL AMOUNT IN WRITTEN WORDS)

TOTAL BASE BID AMOUNT

2. LUMP SUM PRICE FOR BIM COORDINATION

itemized below:

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 2:	Decorative CMU screen wall:		
Add/Deduct		(\$	

(AMOUNT IN DOLLARS & CENTS)

Alt	ernate No. 5A: Decorative Concrete at Cafete	ria Terrace				
Ad	d/Deduct			(\$)
Alt	ernate No. 5B: Enlarged Cafeteria Terrace:					
Ad	d/Deduct			(\$)
<u>UN</u>	NIT PRICES:					
	it prices conform to applicable project specifications Unit Prices:	ation sectior	n. Refer to the sp	ecifications fo	or a complete de	scription of the
		Add	BULK Deduct	TRENC Add	<u>H</u> <u>Deduct</u>	
1.	Price per Cubic Yard for earth excavation as specified In excavation section	c/y	c/y	c/y	c/y	
2.	Price per cubic yard for earth excavation.	c/y	<u>c/y</u>	<u>c/y</u>	<u>c/y</u>	
3.	Price per Square Yard for Light Duty Sidewalk Incl excavation, grading, prep, pour & finish	<u>s</u> /y	s/y	<u>s/y</u>	s/ <u>y</u>	
4.	Price per Square Yard for Heavy Duty Sidewalk Incl excavation, grading, prep, pour & finish	<u>s</u> /y	s/y	s/ <u>y</u>	<u>s/y</u>	
5.	Price per Linear Foot for Concrete Curbing Incl excavation, grading, prep, pour & finish	<u>l/f</u>	<u>l/f</u>	l/f	<u>l/f</u>	
6.	Price per Cubic Yard to supply & install Bio-Media Mix	c/y	<u>c/y</u>	c/y	<u>c/y</u>	
7.	Additional mass concrete in footings_	c/y	<u>c/y</u>	<u>c/y</u>	<u>c/y</u>	
11.	Price per cubic yard for excavation and backfill With select material	c/y	<u>c/y</u>	c/y	<u>c/y</u>	
12.	Price per cubic yard to undercut building subgrade and backfill with structural fill material. Spoils to be placed on site.	c/y	c/y	c/y	c/y	
<u>NC</u> (15	<u>OTE</u> : The difference in price between Add and %).	l Deduct in t	the above Unit I	Prices should 1	not exceed fiftee	n percent
	Ve acknowledge Addendums numbered ot/schedule impact they may have.			and the	price(s) submitte	ed include any
	is bid shall remain valid and cannot be withdra ill abide by the Bid Security forfeiture provisio			•	O .	e undersigned

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation	on
Ву	Trading as
(Individual's / General Partner's / Corporate Name	e)
(State of Corporation)	_
Business Address:	
Witness:	_ By:
(SEAL)	(Authorized Signature) (Title)
	Date:
<u>ATTACHMENTS</u>	
Sub-Contractor List	
Non-Collusion Statement Bid Bond	
Consent of Surety	
Affidavit of Employee Drug Testing Program	
Delaware Business License	
New Castle County Contractor's License	
(Others as Required by Project Manuals)	

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Sitework			
2. Paving			
3. Concrete Sidewal	lks & Curbs		
4. Bioretention Land	dscaping		

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-02 : Si</i>	ttework have been thoroughly examined and	are understood
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE TYPED):		
UTHORIZED REPRESENTATIVE GIGNATURE):		
TTLE:		
ADDRESS OF BIDDER:		
HONE NUMBER:		
worn to and Subscribed before me this	day of	20
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
i	n the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety,	legally authorized to do business in the State of	of Delaware
('State"), are held and firmly unto	the Appoquinimink Sch	nool District in the sum of	
Dollars (S)	, or percent not to exceed		
Dollars (S) of amount of l	oid on Contract No to b	e paid to the
Appoquinimink School District	for the use and benefit of	the Appoquinimink School District for which	h payment well
and truly to be made, we do bind	ourselves, our and each o	f our heirs, executors, administrators, and succ	essors, jointly
and severally for and in the whol	e firmly by these presents.		
a certain proposal to enter into the awarded this Contract, and if said by the terms of this Contract and within twenty days after the date then this obligation shall be void	is contract for the furnishid Principal shall well and to approved by the Appoqu of official notice of the award or else to be and remain in the dated thisday of	That if the above bounden Principal who has any of certain material and/or services within the ruly enter into and execute this Contract as materials. Contract to be entered thereof in accordance with the terms of sain full force and virtue.	ne State, shall be ay be required atered into aid proposal,
	N	ame of Bidder (Organization)	
Corporate	By:		
Seal	Authorized S		
Attest			
	Title		
	Name of Sure	h	
Witness	Name of Sure	ty	
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, the	e
	(Surety Company's Address)
a Suret	y Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awai	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Contractor/Subcontractor Address:		
Authorized Representative (typed or pr	rinted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this	day of	
My Commission expires	NOTARY PUBLIC	<u>.</u>

Contract: A-03: Concrete BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): (A copy of Bidder's Delaware Business License must be attached to this form.) Fax No.: () ______ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT (TOTAL AMOUNT IN WRITTEN WORDS) (AMOUNT IN DOLLARS & CENTS) **ALTERNATES** Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply. Alternate No. 1: Terrazzo Stair Treads and Risers Add/Deduct ____

Ad	d/Deduct				(\$)
Alt	ernate No. 5B: Enlarged Cafeteria Terrace					
Ad	d/Deduct				(\$)
UN	IIT PRICES:					
	it prices conform to applicable project specificati	on section	n. Refer to the sp	pecifications f	or a complete des	scription of th
fol	owing Unit Prices:	<u>Add</u>	BULK Deduct	TRENO Add	CH Deduct	
1.	Price per Cubic Yard for earth excavation as specified In excavation section	c/y	<u>c/y</u>	c/y	c/y	
2.	Price per cubic yard for earth excavation.	c/y	c/y	<u>c/y</u>	<u>c/y</u>	
7.	Additional mass concrete in footings_	c/y	<u>c/y</u>	<u>c/y</u>	<u>c/y</u>	
8.	Price per cubic yard for concrete in foundation walls (including forms and reinforcement)	c/y	c/y_	<u>c/y</u>	c/y	
9.	Price per cubic yard for reinforced concrete on grade.	c/y	c/y	<u>c/y</u>	c/y	
10.	Price per cubic yard for reinforced concrete. Including forms) for structural slabs above grade	c/y	c/y	<u>c/y</u>	c/y	
11.	Price per cubic yard for excavation and backfill With select material	c/y	c/ <u>y</u>	<u>c/y</u>	<u>c/y</u>	
12.	Price per cubic yard to undercut building subgrade and backfill with structural fill material. Spoils to be placed on site.	c/y	c/ <u>y</u>	c/ <u>y</u>	<u>c/y</u>	
13.	Price per cubic yard to undercut footings subgrade and backfill with on-site mined structural fill. Spoils to be placed on site.	c/y	c/ <u>y</u>	<u>c/y</u>	c/y	
14.	Price per cubic yard to undercut footings subgrade and backfill with select spoils to be placed on site	c/y	<u>c/y</u>	c/y	<u>c/y</u>	
15.	Price per cubic yard to undercut footing subgrade and backfill with 106A stone. Spoils to be placed on site.	c/y	c/ <u>y</u>	c/y	<u>c/y</u>	
	$\frac{DTE}{M}$: The difference in price between Add and E.W.).	Deduct in	the above Unit l	Prices should	not exceed fifteer	n percent

T 1: 1 1 / D . 1: / C

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation	on
Ву	Trading as
(Individual's / General Partner's / Corporate Name	e)
(State of Corporation)	-
Business Address:	
Witness:	•
(SEAL)	(Authorized Signature)
	(Title)
J	Date:
<u>ATTACHMENTS</u>	
Sub-Contractor List	
Non-Collusion Statement	
Bid Bond	
Consent of Surety	
Affidavit of Employee Drug Testing Program	
Delaware Business License	
New Castle County Contractor's License	

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
<u>Category</u>	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Concrete			
2. Excavation/Backfill .			
3. Waterproofing			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

JAME OF BIDDER:		
UTHORIZED REPRESENTATIVE [YPED]:		
UTHORIZED REPRESENTATIVE IGNATURE):		
ITLE:		
DDRESS OF BIDDER:		
HONE NUMBER:		
		20
worn to and Subscribed before me this	day of	20_
My Commission expires	. NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of ou	Appoquinimink School District for white theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing of d Principal shall well and truly approved by the Appoquinit of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be elected thereof in accordance with the terms of soll force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20).		
CEALED AND DELIVEDED IN	THE DDECENIOR OF		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest	8		
	Title		
	Name of Surety		
Witness	·		
	Title		

	CONSENT OF SURETY
DATE_	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	en:
We, th	
	(Surety Company's Address)
a Suret	Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awa	ed the Contract No
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or pri	inted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of		
My Commission expires	NOTARY PUBLIC	<u>.</u>	

Contract: A-04: Masonry

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): (A copy of Bidder's Delaware Business License must be attached to this form.) Fax No.: () ______-Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT (TOTAL AMOUNT IN WRITTEN WORDS) (AMOUNT IN DOLLARS & CENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 2: Decorative CMU screen wall:

Add/Deduct ____

Alternate No. 3: Basis of Design Brick Veneer		
Add/Deduct	(\$)
Alternate No. 5B: Enlarged Cafeteria Terrace:		
Add/Deduct	(\$)
Alternate No. 9: Salvage and re-use 2nd floor east exterior stone	window surround	
Add/Deduct	(\$)
Alternate No. 10: Salvage, clean, and re-install existing brick at o	center bay of History Wall	
Add/Deduct	(\$)
Alternate No. 11: Salvage, clean, and re-install existing brick at f	our (4) bays of History Wall	
Add/Deduct	(\$)
<u>UNIT PRICES:</u> Unit prices conform to applicable project specification section. Refollowing Unit Prices:	efer to the specifications for a complete	description of the
	ADD DEDUCT	
17. Price per brick to salvage and clean the existing bricks from the historic 1928 building exterior. The bricks shall be palletized and turned over to the Construction Manager	each	<u>each</u>
NOTE: The difference in price between Add and Deduct in the (15%).	above Unit Prices should not exceed fift	teen percent
I/We acknowledge Addendums numberedcost/schedule impact they may have.	and the price(s) subm	itted include any
This bid shall remain valid and cannot be withdrawn for sixty (60 shall abide by the Bid Security forfeiture provisions. Bid Security		the undersigned
The Owner shall have the right to reject any or all bids, and to wa	nive any informality or irregularity in a	ny bid received.
This bid is based upon work being accomplished by the Sub-Con	tractors named on the list attached to the	his bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the

contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation	ion
By	Trading as
By (Individual's / General Partner's / Corporate Name	ne)
(State of Corporation)	_
Business Address:	
Witness:	_ By:
(SEAL)	(Authorized Signature) (Title)
	Date:
ATTACHMENTS Sub-Contractor List	
Sub-Contractor List Non-Collusion Statement	
Bid Bond	
Consent of Surety	
Affidavit of Employee Drug Testing Program	
Delaware Business License	
New Castle County Contractor's License	
(Others as Required by Project Manuals)	

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Masonry	-		

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

JAME OF BIDDER:		
UTHORIZED REPRESENTATIVE TYPED):		
UTHORIZED REPRESENTATIVE IGNATURE):		
TTLE:		
DDRESS OF BIDDER:		
HONE NUMBER:		
worn to and Subscribed before me this	day of	20_
ly Commission expires	. NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of ou	Appoquinimink School District for white theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing of d Principal shall well and truly approved by the Appoquinit of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be elected thereof in accordance with the terms of soll force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20).		
CEALED AND DELIVEDED IN	THE DDECENIOR OF		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest	8		
	Title		
	Name of Surety		
Witness	·		
	Title		

		CONSENT OF SURETY
DATE_		
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	
Gentle:		
vve, tn	e	
	(Surety Company's	Address)
a Suret	ty Company authorized to do business in t	the State of Delaware hereby agrees that if
		(Contractor)
		(Address)
is awaı	rded the Contract No.	
	ll write the required Performance and/or L	abor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)	
	By	

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:				
Contractor/Subcontractor Address:				
Authorized Representative (typed or pr	inted):			
Authorized Representative (signature):				
Title:				
Sworn to and Subscribed before me this	da	ny of		
My Commission expires	NOTAR	Y PUBLIC	<u>.</u>	

Contract: A-05: Structural Steel & Misc. Metals

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - _____ Fax No.: () _____ - ____ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 1:	Terrazzo Stair Treads and Risers
Add/Deduct	· · · · · · · · · · · · · · · · · · ·

TOTAL BASE BID AMOUNT

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

Alternate No. 12: BIM in Lieu of Traditional Coordinated Shop Drawin	ıgs	
Add/Deduct	(\$)
UNIT PRICES:		
Unit prices conform to applicable project specification section. Refer to the following Unit Prices:	specifications for a complete de	escription of the
NOTE: The difference in price between Add and Deduct in the above Uni (15%).	it Prices should not exceed fifte	en percent
//We acknowledge Addendums numberedcost/schedule impact they may have.	and the price(s) submit	ted include any
This bid shall remain valid and cannot be withdrawn for sixty (60) days the shall abide by the Bid Security forfeiture provisions. Bid Security is attached	. 0	he undersigned

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
ness Address:	
·	
ness:	By:
	(Authorized Signature)
TAT \	
EAL)	(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Structural Steel			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
('State"), are held and firmly unt	o the Appoquinimink Schoo	l District in the sum of	
Dollars (S	, or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to	be paid to the
	l ourselves, our and each of or	Appoquinimink School District for white ar heirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal an	nis contract for the furnishing d Principal shall well and trul approved by the Appoquini e of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within t y enter into and execute this Contract as m mink School District this Contract to be e I thereof in accordance with the terms of sa Il force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20).		
	THE PRECENCE OF		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	By:		
Seal	Authorized Sign		
Attest			
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
Appoquinimink School District 118 South Sixth Street Odessa, De 19730	- - -
men:	
(Surety Company's	s Address)
y Company authorized to do business in t	the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
ded the Contract No.	
-	Labor and Material Bond required by Paragraph 9 of the Instructions to
(Surety Company)	
By(Attorney-in-Fact)	
	118 South Sixth Street Odessa, De 19730 men: (Surety Company) y Company authorized to do business in a ded the Contract No. I write the required Performance and/or I (Surety Company)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or printe	d):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of	20	
My Commission expires	. NOTARY PUBLIC		

Contract: A-06: Carpentry & General Works

BID FORM

For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:	_	E-Mail Address:
Delaware Business License No.:	_	Taxpayer ID No.:
(Other License Nos.):	tached	to this form.)
Phone No.: ()	erstands familithe maees to pok desc	tarized himself with the local conditions under which the terials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, ribed by the aforesaid documents for the lump sum
TOTAL BASE BID AMOUNT	51 (Ψ
\$(TOTAL AMOUNT IN WRITTEN WORDS)		(\$) (AMOUNT IN DOLLARS & CENTS)
ALTERNATES Alternate prices conform to applicable project specification following Alternates. An "ADD" or "DEDUCT" amount is incalled the Alternate No. 2: Decorative CMU screen wall:		on. Refer to specifications for a complete description of the by the crossed out part that does not apply.
Add/Deduct		(\$

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

<i></i>	Trading as
(Individual's / General Partner's / Corporate Name	
(State of Corporation)	-
siness Address:	
	<u> </u>
ness:	By:
	By: (Authorized Signature)
itness:EAL)	•

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Rough Carpentry			-
2. Overhead Doors			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of Contract: A-06: Carpentry & General Works have been thoroughly examined and are

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of o	Appoquinimink School District for whin heirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing of Principal shall well and trul approved by the Appoquini are of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be ell thereof in accordance with the terms of soll force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20).		
CEALED AND DELIVEDED IN	THE DDECENIOR OF		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest	8		
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle:	men:
We, the	e
	(Surety Company's Address)
a Suret	ry Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or pri	inted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of		
My Commission expires	NOTARY PUBLIC	<u>.</u>	

Contract: A-07: Metal Studs & Drywall

BID FORM

For Bids Due:	-	ppoquinimink School District
		8 South Sixth Street dessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:	E-	Mail Address:
Delaware Business License No.:	Ta	xpayer ID No.:
(Other License Nos.):(A copy of Bidder's Delaware Business License	e must be attached to th	is form.)
Phone No.: ()	Fax	No.: ()
accordance therewith, that he has visited the Work is to be performed, and that his bid is l Documents without exception, hereby propo	site and has familiarized cased upon the material ses and agrees to provi	e Bidding Documents and that this bid is made in ed himself with the local conditions under which the ls, systems and equipment described in the Bidding ide all labor, materials, plant, equipment, supplies, l by the aforesaid documents for the lump sum
1. LUMP SUM PRICE FOR THE CON	TRACT WORK	\$
2. LUMP SUM PRICE FOR BIM COO	PRDINATION	<u>\$</u>
TOTAL BASE BID AMOUNT		
\$		(\$)
(TOTAL AMOUNT IN WRITTEN)	WORDS)	(AMOUNT IN DOLLARS & CENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

UNIT PRICES:

<u> </u>			
Unit prices conform to applicable project specifi following Unit Prices:	ication section. Refer to the	he specifications for a complete descri	ption of the
16. Price for each additional month rental of PAC scaffolding.	/month	/month	
NOTE: The difference in price between Add ar (15%).	nd Deduct in the above U	Init Prices should not exceed fifteen p	ercent
I/We acknowledge Addendums numbered cost/schedule impact they may have.		and the price(s) submitted i	include any
This bid shall remain valid and cannot be withd shall abide by the Bid Security forfeiture provisi	, , ,	1	ndersigned
The Owner shall have the right to reject any or a	all bids, and to waive any	γ informality or irregularity in any bid	ł received.
This bid is based upon work being accomplishe	ed by the Sub-Contractors	s named on the list attached to this bid	1.
			_

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

у	Trading as
(Individual's / General Partner's / Cor	rporate Name)
(State of Corporation)	
siness Address:	
	By:
tness:	· ·
EEAL)	(Authorized Signature) (Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Metal Stud Framir	ng		· -
2. EIFS		_	

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract</i> : understood.	A-07: Metal Studs & Drywall have been thoroughly	examined and are
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE (TYPED):		
AUTHORIZED REPRESENTATIVE (SIGNATURE):		
TITLE:		
ADDRESS OF BIDDER:		
PHONE NUMBER:		
Sworn to and Subscribed before me this _	day of	20
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		District in the sum of	
Dollars (S)	, or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to	be paid to the
	ourselves, our and each of ou	Appoquinimink School District for which theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if said by the terms of this Contract and	is contract for the furnishing of d Principal shall well and truly approved by the Appoquinir of official notice of the award	at if the above bounden Principal who has of certain material and/or services within the center into and execute this Contract as maink School District this Contract to be enthereof in accordance with the terms of sall force and virtue.	he State, shall be ay be required ntered into
Sealed withseal and(20_		in the year of our Lord t	two thousand
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Name	e of Bidder (Organization)	
Corporate	Bv:		
Seal Attest	Authorized Sign		
	Title		
Mitnaga	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, the	e
	(Surety Company's Address)
a Suret	ry Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Authorized Representative (typed or pri	nted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	<u>.</u>

Contract: A-08: Roofing & Waterproofing

BID FORM

For Bids Due:	To:	Appoquinimink School District
		118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.):		
(A copy of Bidder's Delaware Business License must be	<u>attached</u>	to this form.)
Phone No.: ()		Fax No.: ()
The undersigned, representing that he has read and unaccordance therewith, that he has visited the site and lework is to be performed, and that his bid is based upon Documents without exception, hereby proposes and a transport and other facilities required to execute the way.	nderstan has famil on the ma	ds the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies,
The undersigned, representing that he has read and us accordance therewith, that he has visited the site and I Work is to be performed, and that his bid is based upo	nderstan has famil on the ma grees to vork desc	ds the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies,
The undersigned, representing that he has read and unaccordance therewith, that he has visited the site and lework is to be performed, and that his bid is based upon Documents without exception, hereby proposes and a transport and other facilities required to execute the witemized below:	nderstan has famil on the ma grees to york desc WORK	ids the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, cribed by the aforesaid documents for the lump sum
The undersigned, representing that he has read and us accordance therewith, that he has visited the site and I Work is to be performed, and that his bid is based upon Documents without exception, hereby proposes and a transport and other facilities required to execute the witemized below: 1. LUMP SUM PRICE FOR THE CONTRACT TO THE C	nderstan has famil on the ma grees to york desc WORK	ids the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, cribed by the aforesaid documents for the lump sum
The undersigned, representing that he has read and us accordance therewith, that he has visited the site and lework is to be performed, and that his bid is based upon Documents without exception, hereby proposes and a transport and other facilities required to execute the witemized below: 1. LUMP SUM PRICE FOR THE CONTRACT 1. 2. LUMP SUM PRICE FOR BIM COORDINAT	nderstan has famil on the ma grees to york desc WORK	Ids the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, cribed by the aforesaid documents for the lump sum \$
The undersigned, representing that he has read and us accordance therewith, that he has visited the site and lework is to be performed, and that his bid is based upon Documents without exception, hereby proposes and a transport and other facilities required to execute the witemized below: 1. LUMP SUM PRICE FOR THE CONTRACT 1. 2. LUMP SUM PRICE FOR BIM COORDINAT	nderstan has famil on the ma grees to vork desc WORK	ids the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, cribed by the aforesaid documents for the lump sum
The undersigned, representing that he has read and us accordance therewith, that he has visited the site and lework is to be performed, and that his bid is based upon Documents without exception, hereby proposes and a transport and other facilities required to execute the witemized below: 1. LUMP SUM PRICE FOR THE CONTRACT Solution 1. LUMP SUM PRICE FOR BIM COORDINAT TOTAL BASE BID AMOUNT	nderstan has famil on the ma grees to vork desc WORK	Ids the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, cribed by the aforesaid documents for the lump sum \$
The undersigned, representing that he has read and us accordance therewith, that he has visited the site and I Work is to be performed, and that his bid is based upon Documents without exception, hereby proposes and a transport and other facilities required to execute the witemized below: 1. LUMP SUM PRICE FOR THE CONTRACT TOTAL BASE BID AMOUNT TOTAL BASE BID AMOUNT (TOTAL AMOUNT IN WRITTEN WORDS) ALTERNATES	nderstan has famil on the ma grees to vork desc WORK FION tion secti	ds the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, cribed by the aforesaid documents for the lump sum \$
The undersigned, representing that he has read and us accordance therewith, that he has visited the site and I Work is to be performed, and that his bid is based upon Documents without exception, hereby proposes and a transport and other facilities required to execute the witemized below: 1. LUMP SUM PRICE FOR THE CONTRACT TOTAL BASE BID AMOUNT TOTAL BASE BID AMOUNT (TOTAL AMOUNT IN WRITTEN WORDS) ALTERNATES Alternate prices conform to applicable project specifical	nderstan has famil on the ma grees to vork desc WORK FION tion secti	ds the Bidding Documents and that this bid is made in liarized himself with the local conditions under which the aterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, cribed by the aforesaid documents for the lump sum \$

Alternate No. 6: Lightning Protection System		
Add/Deduct	(\$)
UNIT PRICES:		
Unit prices conform to applicable project specification section. R following Unit Prices:	Refer to the specifications for a complete de	scription of the
NOTE: The difference in price between Add and Deduct in the (15%).	above Unit Prices should not exceed fiftee	n percent
I/We acknowledge Addendums numberedcost/schedule impact they may have.	and the price(s) submitte	ed include any
This bid shall remain valid and cannot be withdrawn for sixty (6 shall abide by the Bid Security forfeiture provisions. Bid Security		e undersigned

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

у	Trading as
(Individual's / General Partner's / Cor	rporate Name)
(State of Corporation)	
siness Address:	
	By:
tness:	· ·
EEAL)	(Authorized Signature) (Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Elastomeric			
Membrane Roc	ofing		

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of *Contract: A-08 : Roofing & Waterproofing* have been thoroughly examined and are

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That:in the County of		of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
('State"), are held and firmly unt	o the Appoquinimink Schoo	l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of ou	Appoquinimink School District for white theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing of d Principal shall well and truly approved by the Appoquinit e of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be e I thereof in accordance with the terms of s Il force and virtuein the year of our Lord	the State, shall be nay be required entered into said proposal,
and(20).		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest			
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle:	nen:
We, the	
	(Surety Company's Address)
a Suret	Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	ded the Contract No.
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By
	(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
_			
Authorized Representative (typed or prir	ited):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this _	day of	20	·
My Commission expires	NOTARY PUBL	IC	

Contract: A-09: Metal Wall Panels

	BID FOR	<u>NM</u>
For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.): (A copy of Bidder's Delaware Business License must be a		o this form.)
Phone No.: ()]	Fax No.: ()
The undersigned, representing that he has read and und accordance therewith, that he has visited the site and has Work is to be performed, and that his bid is based upor Documents without exception, hereby proposes and ag transport and other facilities required to execute the woitemized below:	as familia n the mate rees to pr	rized himself with the local conditions under which the erials, systems and equipment described in the Bidding rovide all labor, materials, plant, equipment, supplies,
1. LUMP SUM PRICE FOR THE CONTRACT W	JORK	\$
2. LUMP SUM PRICE FOR BIM COORDINATI	ON	\$
TOTAL BASE BID AMOUNT		

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

NOTE: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

·	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
iness Address:	
tness:	
EAL)	(Authorized Signature)
	(Title)
D	ate:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
<u>Category</u>	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
<i>,</i>			or Delaware Business license #
1. Metal Wall Panels		_	

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-09 : M</i>		
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE TYPED):		
AUTHORIZED REPRESENTATIVE SIGNATURE):		
TITLE:		
ADDRESS OF BIDDER:		·
HONE NUMBER:		
Sworn to and Subscribed before me this	day of	20
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, le	gally authorized to do business in the State	of Delaware
('State"), are held and firmly unto	the Appoquinimink Scho	ol District in the sum of	
Dollars (S)	, or percent not to exceed $_$	d on Contract No to	
Dollars (S) of amount of bio	d on Contract No to	be paid to the
		te Appoquinimink School District for which	
•		our heirs, executors, administrators, and suc	cessors, jointly
and severally for and in the whol	e firmly by these presents.		
NOW THE CONTRIBUTION OF THE	CODE IO ATION I IO CLICII T		1 11
		hat if the above bounden Principal who has	
		g of certain material and/or services within the	
		lly enter into and execute this Contract as m	
		imink School District this Contract to be en	
		d thereof in accordance with the terms of sa	ıid proposal,
then this obligation shall be void	or else to be and remain in f	ull force and virtue.	
Cooled with	d data d this - dans of	in the area of our Loud	th
and(20_	a dated thisday of	in the year of our Lord	two mousand
and(20_	_)·		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nai	ne of Bidder (Organization)	
	D.		
Corporate	Ву:		
Seal	Authorized Sig	nature	
Attest	Tid		
	Title		
	Name of Surety	,	
Witness	rame of Surety		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Title		

	CONSENT OF SURETY
DATE_	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	ien:
We, the	
	(Surety Company's Address)
a Suret	Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awar	led the Contract No.
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By(Attorney-in-Fact)
	(Auomey-m-ract)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Contractor/Subcontractor Address:		
Authorized Representative (typed or pr	rinted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this	day of	
My Commission expires	NOTARY PUBLIC	<u>.</u>

Contract: A-10: Doors, Frames, and Hardware Supply

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - _____ Fax No.: () _____ - ____ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
iness Address:	
tness:	By:
	(Authorized Signature)
EAL)	
,	(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID #
,		•	or Delaware Business license #
1. Doors, Frames, and			
Hardware Supply			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of *Contract: A-10: Doors, Frames, and Hardware Supply* have been thoroughly examined and are understood. NAME OF BIDDER: **AUTHORIZED REPRESENTATIVE** (TYPED): **AUTHORIZED REPRESENTATIVE** (SIGNATURE): TITLE: ADDRESS OF BIDDER: PHONE NUMBER: Sworn to and Subscribed before me this ______ day of ______ 20____. My Commission expires ______. NOTARY PUBLIC ______.

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
('State"), are held and firmly unt	o the Appoquinimink Schoo	District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to	be paid to the
	d ourselves, our and each of ou	Appoquinimink School District for which theirs, executors, administrators, and suc	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal andseal andseal.	nis contract for the furnishing of d Principal shall well and truly approved by the Appoquinit of official notice of the award or else to be and remain in full d dated thisday of	at if the above bounden Principal who has of certain material and/or services within the y enter into and execute this Contract as m mink School District this Contract to be en thereof in accordance with the terms of sa ll force and virtue.	he State, shall be nay be required ntered into aid proposal,
and(20).		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
	1 Valle	tor brader (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest			
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY	
DATE_	E	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	
Gentle	lemen:	
We, th	the	
	(Surety Company's Address)	
a Suret	rety Company authorized to do business in the State of Delaware hereby agrees tha	t if
	(Contractor)	
	(Address)	
is awa	varded the Contract No.	
	vill write the required Performance and/or Labor and Material Bond required by Pa	aragraph 9 of the Instructions to
	(Surety Company)	
	By(Attorney-in-Fact)	

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
_		
Authorized Representative (typed or pri	nted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	<u>.</u>

Contract: A-11: Glass & Glazing

BID FORM

	<u> </u>	ICIVI
For Bids Due:	То:	Appoquinimink School District
		118 South Sixth Street
		Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Contact Ivanic.		L-Man Address.
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.):		
(A copy of Bidder's Delaware Business License mus		to this form.)
Phone No.: ()		Fax No.: ()
The undersigned, representing that he has read as	nd understand	ds the Bidding Documents and that this bid is made in
		iarized himself with the local conditions under which the
Work is to be performed, and that his bid is based	l upon the ma	terials, systems and equipment described in the Bidding
1 , 1		provide all labor, materials, plant, equipment, supplies,
•	he work desc	ribed by the aforesaid documents for the lump sum
itemized below:		
1. LUMP SUM PRICE FOR THE CONTRA	CT WORK	\$
2. LUMP SUM PRICE FOR BIM COORDI	NATION	\$
TOTAL BASE BID AMOUNT		
\$		(\$)
(TOTAL AMOUNT IN WRITTEN WOR	(DS)	(AMOUNT IN DOLLARS & CENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
iness Address:	
tness:	Ву:
EAL)	(Authorized Signature)
LAL)	(Title)
ח	ate:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Windows	-	_	-
2. Storefronts			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract</i> :	A-11: Glass & Glazing have been thoroughly ex	kamined and are understoo
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE TYPED):		
UTHORIZED REPRESENTATIVE SIGNATURE):		
ITLE:		
DDRESS OF BIDDER:		
- -		
HONE NUMBER: _		
worn to and Subscribed before me this	day of	20
	•	
My Commission expires	. NOTARY PUBLIC	·

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE P	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
('State"), are held and firmly un	to the Appoquinimink School	District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to	be paid to the
	d ourselves, our and each of ou	Appoquinimink School District for white theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if same by the terms of this Contract and within twenty days after the date then this obligation shall be void Sealed withseal ar	his contract for the furnishing old Principal shall well and truly approved by the Appoquinit e of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be earl thereof in accordance with the terms of soll force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20).		
	THE PRESENCE OF		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest	8		
	Title		
	Name of Surety	_	
Witness			
	 Title		
	1100		

		CONSENT OF SURETY
DATE	I <u> </u>	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	- - -
Gentle	emen:	
We, th	ne	
	(Surety Company'	s Address)
a Sure	ety Company authorized to do business in	the State of Delaware hereby agrees that if
		(Contractor)
		(Address)
is awa	arded the Contract No.	
	ill write the required Performance and/or I	Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)	
	Rv	

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
_		
Authorized Representative (typed or pri	nted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	<u>.</u>

Contract: A-12: Casework & Millwork

BID FORM

For Bids Due:	То:	Appoquinimink School District
		118 South Sixth Street
		Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.):		
(A copy of Bidder's Delaware Business License mu	st be attached	to this form.)
Phone No.: ()		Fax No.: ()
		ds the Bidding Documents and that this bid is made in
•		arized himself with the local conditions under which the
•	•	terials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies,
1 7 1 1		ribed by the aforesaid documents for the lump sum
itemized below:	one work diese.	and the survey and survey and the summing court
1. LUMP SUM PRICE FOR THE CONTRA	ACT WORK	\$
2. LUMP SUM PRICE FOR BIM COORDI	NATION	\$
TOTAL BASE BID AMOUNT		
\$		(\$)
(TOTAL AMOUNT IN WRITTEN WOI	RDS)	(AMOUNT IN DOLLARS & CENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
iness Address:	
tness:	
EAL)	(Authorized Signature)
	(Title)
D	ate:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Casework		_	
2. Millwork			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-12 : C</i> understood.	Casework & Millwork have been thoroughly	examined and are
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE (TYPED):		
AUTHORIZED REPRESENTATIVE (SIGNATURE):		
TITLE:		
ADDRESS OF BIDDER:		
PHONE NUMBER:		
Sworn to and Subscribed before me this	day of	20
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		District in the sum of	
Dollars (S)	, or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to 1	be paid to the
	ourselves, our and each of ou	Appoquinimink School District for which theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if said by the terms of this Contract and	is contract for the furnishing of d Principal shall well and truly approved by the Appoquinir of official notice of the award	at if the above bounden Principal who has of certain material and/or services within the enter into and execute this Contract as maink School District this Contract to be enough thereof in accordance with the terms of sall force and virtue.	he State, shall be ay be required ntered into
Sealed withseal and(20_		in the year of our Lord t	two thousand
SEALED, AND DELIVERED IN	ΓHE PRESENCE OF		
	Name	e of Bidder (Organization)	
Corporate	Bv:		
Seal Attest	Authorized Sign		
	Title		
Witness	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, the	e
	(Surety Company's Address)
a Suret	y Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awai	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or printe	d):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of	20	_•
My Commission expires	NOTARY PUBLIC		<u>.</u>

Contract: A-13: Paint & Wallcoverings

BID FORM

For Bids Due:	То:	Appoquinimink School District	
		118 South Sixth Street	
		Odessa, De 19730	
Name of Bidder:			
Bidder Address:			
Contact Name:		E-Mail Address:	
Delaware Business License No.:		Taxpayer ID No.:	
(Other License Nos.):			
(A copy of Bidder's Delaware Business Licens	se must be attached	to this form.)	
Phone No.: ()		Fax No.: ()	
2 1		ds the Bidding Documents and that this bid is made	
·		liarized himself with the local conditions under whi	
•	-	aterials, systems and equipment described in the Bi	_
1 , 1		provide all labor, materials, plant, equipment, supp rribed by the aforesaid documents for the lump sum	
itemized below:	ecute the work desci	ribed by the aforesaid documents for the fump sun	1
1. LUMP SUM PRICE FOR THE COM	NTRACT WORK	\$	
2. LUMP SUM PRICE FOR BIM COO	ORDINATION	<u>\$</u>	
TOTAL BASE BID AMOUNT			
\$		(\$	
(TOTAL AMOUNT IN WRITTEN	WORDS)	(AMOUNT IN DOLLARS & CI	ENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

7	Trading as
(Individual's / General Partner's / Corporate Name)
(State of Corporation)	
siness Address:	
	<u> </u>
tness:	Bv:
	(Authorized Signature)
	(Tatalonical organical or
EAL)	(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Painting			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of *Contract: A-13: Paint & Wallcovering* have been thoroughly examined and are

understood.		
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE (TYPED):		
AUTHORIZED REPRESENTATIVE (SIGNATURE):		
TITLE:		
PHONE NUMBER:		_
Sworn to and Subscribed before me this	day of	20
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	W ALL MEN BY THESE PRESENTS That:ofand State of		
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of o	Appoquinimink School District for whin heirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing d Principal shall well and trul approved by the Appoquini e of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be e I thereof in accordance with the terms of so ll force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20		•	
SEALED, AND DELIVERED IN	THE PRESENCE OF	e of Bidder (Organization)	
	1 Valid	e of bidder (Organization)	
Corporate	By:		
Seal	Authorized Sign		
Attest			
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle:	nen:
We, the	
	(Surety Company's Address)
a Suret	Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	ded the Contract No
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By
	(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
_		
Authorized Representative (typed or pri	nted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	·

Contract: A-14: Acoustical Ceilings & Wall Panels

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - _____ Fax No.: () _____ - ____ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

У	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
siness Address:	
tness:	
	(Authorized Signature)
EAL)	

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor				
Category	Subcontractor	Address	(City & State)	Subcontractors tax payer ID # or Delaware Business license #
Acoustical Ceilings				

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of o	Appoquinimink School District for whin heirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing of Principal shall well and trul approved by the Appoquini are of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be ell thereof in accordance with the terms of soll force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20).		
CEALED AND DELIVEDED IN	THE DDECENIOR OF		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest	8		
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle:	nen:
We, the	
	(Surety Company's Address)
a Suret	Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	led the Contract No
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	Ву
	(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Authorized Representative (typed or pri	nted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	<u>.</u>

Contract: A-15: Carpet & VCT

BID FORM

For Bids Due: To: Name of Bidder: Bidder Address:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
	Odessa, De 17756
Bidder Address:	
Contact Name:	E-Mail Address:
Delaware Business License No.:	Taxpayer ID No.:
(Other License Nos.):(A copy of Bidder's Delaware Business License must be attached	ed to this form.)
(12 copy of Brauer's Beautiful Business Electise Inuse be accused	(2 10 m)
Phone No.: ()	Fax No.: ()
The undersigned, representing that he has read and understa accordance therewith, that he has visited the site and has fam Work is to be performed, and that his bid is based upon the representation because the body and other facilities required to execute the work de itemized below:	niliarized himself with the local conditions under which the materials, systems and equipment described in the Bidding o provide all labor, materials, plant, equipment, supplies,
1. LUMP SUM PRICE FOR THE CONTRACT WORK	\$
2. LUMP SUM PRICE FOR BIM COORDINATION	\$
TOTAL BASE BID AMOUNT	
¢.	(\$
(TOTAL AMOUNT IN WRITTEN WORDS)	(AMOUNT IN DOLLARS & CENTS)
ALTERNATES Alternate prices conform to applicable project specification sec following Alternates. An "ADD" or "DEDUCT" amount is indicated. Alternate No. 1: Terrazzo Stair Treads and Risers	ction. Refer to specifications for a complete description of the ed by the crossed out part that does not apply.
Add/Deduct	(\$

Alternate No. 4: Millwork Rubber Base		
Add/Deduct	(\$)
UNIT PRICES:		
Unit prices conform to applicable project specification section. R following Unit Prices:	defer to the specifications for a complete de	scription of the
NOTE: The difference in price between Add and Deduct in the (15%).	above Unit Prices should not exceed fiftee	n percent
I/We acknowledge Addendums numberedcost/schedule impact they may have.	and the price(s) submitte	ed include any
This bid shall remain valid and cannot be withdrawn for sixty (6 shall abide by the Bid Security forfeiture provisions. Bid Security		e undersigned

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

<i></i>	Trading as
(Individual's / General Partner's / Corporate Name	
(State of Corporation)	
siness Address:	
mess:	. By:
	By:(Authorized Signature)
itness:EAL)	•

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Carpet			
2. VCT			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-15</i>	5: Carpet & VCT have been thoroughly exami	ned and are understood.
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE (TYPED):		
AUTHORIZED REPRESENTATIVE (SIGNATURE):		
TITLE:		
PHONE NUMBER:		
Sworn to and Subscribed before me this	day of	
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, le	gally authorized to do business in the State	of Delaware
('State"), are held and firmly unto	o the Appoquinimink Scho	ol District in the sum of	
Dollars (S)	, or percent not to exceed	on Contract Noto	
Dollars (S) of amount of bic	on Contract No to	be paid to the
		e Appoquinimink School District for which	
		our heirs, executors, administrators, and suc	cessors, jointly
and severally for and in the whol	e firmly by these presents.		
		hat if the above bounden Principal who has	
		of certain material and/or services within the	
	-	ly enter into and execute this Contract as m	
		mink School District this Contract to be en	
		d thereof in accordance with the terms of sa	ıid proposal,
then this obligation shall be void	or else to be and remain in fo	ıll force and virtue.	
Cooled on the	A Asta Attala	in the constant and	(a (la aa 1
and(20_	d dated thisday of	in the year of our Lord	two thousand
and(20_).		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	THE TRECEIVEE OF		
	Nar	ne of Bidder (Organization)	
Composato	D		
Corporate Seal	Authorized Sig	naturo	
	Authorized Sig	nature	
Attest	Title		
	Title		
	Name of Surety		
Witness	runne er eurety		
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, the	e
	(Surety Company's Address)
a Suret	y Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
_		
_		
Authorized Representative (typed or pri	inted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this	day of	
My Commission expires	NOTARY PUBLIC	

Contract: A-16: Ceramic Tile

	BID FO	<u>RM</u>
For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.):(A copy of Bidder's Delaware Business License must be		
Phone No.: ()		Fax No.: ()
accordance therewith, that he has visited the site and Work is to be performed, and that his bid is based up	has famili oon the ma agrees to p	ds the Bidding Documents and that this bid is made in larized himself with the local conditions under which the terials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, ribed by the aforesaid documents for the lump sum
1. LUMP SUM PRICE FOR THE CONTRACT	WORK	\$
2. LUMP SUM PRICE FOR BIM COORDINA	TION	<u>\$</u>
TOTAL BASE BID AMOUNT		
\$(TOTAL AMOUNT IN WRITTEN WORDS	6)	(\$) (AMOUNT IN DOLLARS & CENTS)
ALTERNATES Alternate prices conform to applicable project specificate following Alternates. An "ADD" or "DEDUCT" amount in the Alternate No. 8: Porcelain Tile Flooring in Toilet Rock	s indicated	on. Refer to specifications for a complete description of the by the crossed out part that does not apply.
Add/Deduct		

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Nar	
(State of Corporation)	
siness Address:	
tness:	By:
EAL)	(Authorized Signature)
	(Title)
	Date:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Ceramic Tile			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

Commission expires	NOTARY	PUBLIC	
orn to and Subscribed before me this		day of	20_
ONE NUMBER:			
DDRESS OF BIDDER:			
LE:			
THORIZED REPRESENTATIVE GNATURE):			
THORIZED REPRESENTATIVE			
ME OF BIDDER:			

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	ofofand State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
('State"), are held and firmly unto	the Appoquinimink School	District in the sum of	
Dollars (S)	, or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to 1	be paid to the
	ourselves, our and each of ou	Appoquinimink School District for which theirs, executors, administrators, and successive successive security.	
a certain proposal to enter into the awarded this Contract, and if said by the terms of this Contract and	is contract for the furnishing of d Principal shall well and truly approved by the Appoquinit of official notice of the award	at if the above bounden Principal who has of certain material and/or services within the enter into and execute this Contract as maink School District this Contract to be enough thereof in accordance with the terms of sall force and virtue.	he State, shall be ay be required ntered into
Sealed withseal and(20_		in the year of our Lord t	two thousand
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal Attest	Authorized Sign		
	Title		
Mitnaga	Name of Surety		
Witness			
	Title		

	CON	ISENT OF SURETY
DATE	3	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	
Gentle		
We, th	he	
	(Surety Company's Add	lress)
a Suret	ety Company authorized to do business in the Sta	ate of Delaware hereby agrees that if
	(Con	tractor)
	(Add	lress)
is awa	arded the Contract No	
	rill write the required Performance and/or Labor	and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)	
	Ву	

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Authorized Representative (typed or pri	nted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	<u>.</u>

Contract: A-17: Terrazzo Tile

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - _____ Fax No.: () _____ - ____ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 1:	Terrazzo Stair Treads and Risers	

(TOTAL AMOUNT IN WRITTEN WORDS)

Add/Deduct (\$

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
oinean Addings	
iness Address:	
tness:	
EAL)	(Authorized Signature)
	(Title)
D	ate:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Terrazzo Tile		_	

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

AME OF BIDDER:		
UTHORIZED REPRESENTATIVE YPED):		
THORIZED REPRESENTATIVE GNATURE):		
TLE:		
DDRESS OF BIDDER:		
ONE NUMBER		
orn to and Subscribed before me this	day of	20
Commission expires	·	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That:		of	
	in the County of	and State of	as
Principal, and	of	in the County of	
		y, legally authorized to do business in the State o	
		chool District in the sum of	
Dollars (S)	, or percent not to exceed	l	
Dollars (S) of amount o	l to b	e paid to the
Appoquinimink School District	for the use and benefit of	of the Appoquinimink School District for which	h payment well
and truly to be made, we do bind	ourselves, our and each	of our heirs, executors, administrators, and succ	essors, jointly
and severally for and in the whol	e firmly by these present	S.	
NOW THE CONDITION OF TH	IS OBLIGATION IS SUC	H That if the above bounden Principal who has s	submitted to the
		ning of certain material and/or services within th	
1 1		truly enter into and execute this Contract as ma	
		uinimink School District this Contract to be en	
		ward thereof in accordance with the terms of sai	
then this obligation shall be void			- p p
g			
Sealed with seal and	d dated this day of	in the year of our Lord to	wo thousand
and(20_		,	
	_ ,		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	-	Name of Bidder (Organization)	
		ivanie of bluder (Organization)	
Corporate	Ву:		
Seal	Authorized	Signature	
Attest			
	Title		
	Name of Su	rety	
Witness		,	
			_
	Title		

	CONSENT OF SURETY
DATE	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	nen:
We, th	
	(Surety Company's Address)
a Sure	Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awa	led the Contract No.
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or prin	ted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this _	day of		
My Commission expires	. NOTARY PUBLIC	<u>.</u>	

Contract: A-18: Fluid-Applied Flooring

BID FORM

For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.):(A copy of Bidder's Delaware Business License must be	oe attached	to this form.)
Phone No.: ()		Fax No.: ()
accordance therewith, that he has visited the site and Work is to be performed, and that his bid is based u	d has famil pon the ma l agrees to J	ds the Bidding Documents and that this bid is made in iarized himself with the local conditions under which the iterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, ribed by the aforesaid documents for the lump sum
1. LUMP SUM PRICE FOR THE CONTRACT	T WORK	\$
2. LUMP SUM PRICE FOR BIM COORDINA	ATION	<u>\$</u>
TOTAL BASE BID AMOUNT		
\$(TOTAL AMOUNT IN WRITTEN WORD	S)	(\$) (AMOUNT IN DOLLARS & CENTS)
ALTERNATES Alternate prices conform to applicable project specific following Alternates. An "ADD" or "DEDUCT" amount		on. Refer to specifications for a complete description of the by the crossed out part that does not apply.
Alternate No. 8: Porcelain Tile Flooring in Toilet Ro	ooms	
Add/Deduct		_(\$)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

Trading as
Ву:
(Authorized Signature)
(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Fluid-Applied Flooring			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of *Contract: A-18: Fluid-Applied Flooring* have been thoroughly examined and are

ınderstood.		
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE		
UTHORIZED REPRESENTATIVE SIGNATURE):		
TLE:		
HONE NUMBER:		
worn to and Subscribed before me this	day of	20
Ty Commission expires		

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, le	gally authorized to do business in the State	of Delaware
('State"), are held and firmly unto	o the Appoquinimink Scho	ol District in the sum of	
Dollars (S)	, or percent not to exceed	on Contract No to	
Dollars (S) of amount of bid	on Contract No to	be paid to the
		e Appoquinimink School District for which	
		ur heirs, executors, administrators, and suc	cessors, jointly
and severally for and in the whol	e firmly by these presents.		
NOM THE COMPLETON OF TH			1 '0 1 0
		hat if the above bounden Principal who has	
		of certain material and/or services within the	
	-	ly enter into and execute this Contract as m	
		mink School District this Contract to be en	
		d thereof in accordance with the terms of sa	na proposal,
then this obligation shall be void	or else to be and remain in h	ill force and virtue.	
Spaled with spal an	d dated this day of	in the year of our Lord	two thousand
and(20_)	nt the year of our Lord	two thousand
	/·		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nan	ne of Bidder (Organization)	
C 1 -	D		
Corporate	By:	n a branco	
Seal	Authorized Sig	nature	
Attest	Tid.		
	Title		
	Name of Surety		
Witness	Name of Surety		
	Title		<u> </u>

		CONSENT OF SURETY
DATE	<u> </u>	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	- - -
Gentle	emen:	
We, th	ne	
	(Surety Company'	s Address)
a Sure	ety Company authorized to do business in	the State of Delaware hereby agrees that if
		(Contractor)
		(Address)
is awa	arded the Contract No.	
	ill write the required Performance and/or I	Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)	
	B _V	

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Contractor/Subcontractor Address:		
Authorized Representative (typed or pr	rinted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this	day of	
My Commission expires	NOTARY PUBLIC	<u>.</u>

Contract: A-19: Wood & Athletic Flooring

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - _____ Fax No.: () _____ - ____ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

TOTAL BASE BID AMOUNT

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
siness Address:	
tness:	By:
	(Authorized Signature)
EAL)	(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Wood Flooring			
2. Resilient Athletic Flooring			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of Contract: A-19: Wood & Athletic Flooring have been thoroughly examined and are

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, le	gally authorized to do business in the State	of Delaware
('State"), are held and firmly unto	o the Appoquinimink Scho	ol District in the sum of	
Dollars (S)	, or percent not to exceed	l on Contract No to	
Dollars (S) of amount of bio	l on Contract No to	be paid to the
		e Appoquinimink School District for which	
•		our heirs, executors, administrators, and suc	cessors, jointly
and severally for and in the whol	e firmly by these presents.		
		hat if the above bounden Principal who has	
		of certain material and/or services within the	
	-	ly enter into and execute this Contract as m	
		imink School District this Contract to be en	
		d thereof in accordance with the terms of sa	aid proposal,
then this obligation shall be void	or else to be and remain in f	all force and virtue.	
Cooled with	d date d thee - dans of	in the area of our Loud	th
and(20_	u dated thisday of	in the year of our Lord	two mousand
and(20_).		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nar	ne of Bidder (Organization)	
	D.		
Corporate	By:	and the same	
Seal	Authorized Sig	nature	
Attest	Tr.d		
	Title		
	Name of Surety		
Witness	rvanie of Surety		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Title		

	CONSENT OF SURETY
DATE	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, th	e
	(Surety Company's Address)
a Sure	y Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awa	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or pri	inted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of		
My Commission expires	NOTARY PUBLIC	<u>.</u>	

Contract: A-20: Gymnasium Equipment & Bleachers

	BID FOR	<u>RM</u>
For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.):(A copy of Bidder's Delaware Business License must b		
Phone No.: ()		Fax No.: ()
accordance therewith, that he has visited the site and Work is to be performed, and that his bid is based up	d has familia pon the mat agrees to p	s the Bidding Documents and that this bid is made in arized himself with the local conditions under which the erials, systems and equipment described in the Bidding rovide all labor, materials, plant, equipment, supplies, ibed by the aforesaid documents for the lump sum
1. LUMP SUM PRICE FOR THE CONTRACT	г work	\$
2. LUMP SUM PRICE FOR BIM COORDINA	TION	\$
TOTAL BASE BID AMOUNT		

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

Trading as
-
By:
(Authorized Signature)
(Title) Date:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Gym Equipment			
2. Bleachers		_	

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
in the County of		and State of	as
Principal, and	of	in the County of	
and State of	as Surety, le	gally authorized to do business in the State	of Delaware
('State"), are held and firmly unto	the Appoquinimink School	ol District in the sum of	
Dollars (S)	, or percent not to exceed	on Contract No to	
Dollars (S) of amount of bid	on Contract No to	be paid to the
		e Appoquinimink School District for which	
•		ur heirs, executors, administrators, and suc	cessors, jointly
and severally for and in the whol	e firmly by these presents.		
		nat if the above bounden Principal who has	
		of certain material and/or services within the	
	•	ly enter into and execute this Contract as m	
		mink School District this Contract to be en	
		d thereof in accordance with the terms of sa	iid proposal,
then this obligation shall be void	or else to be and remain in fu	ıll force and virtue.	
Cooled with	d data d this dans of	in the case of and I and I	tara tharrana d
and(20_	d dated thisday of	in the year of our Lord	two mousand
and(20_	_)·		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nan	ne of Bidder (Organization)	
	n.		
Corporate	By:		
Seal	Authorized Sign	nature	
Attest			
	Title		
	Name of Surety		
Witness	Name of Surety		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle:	men:
We, the	e
	(Surety Company's Address)
a Suret	ry Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or printe	d):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of	20	_•
My Commission expires	NOTARY PUBLIC		<u>.</u>

Contract: A-21: Theatrical Audio/Visual Equipment

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.) Fax No.: () ______ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
cinose Address	
iness Address:	
itness:	By:
	(Authorized Signature)
EAL)	(Title)
	,

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
		•	or Delaware Business license #
1. A/V Equipment		_	

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

TS That:	of	
County of	and State of	as
of	in the County of	
ppoquinimink Schoo	ol District in the sum of	
cent not to exceed		
) of amount of bid	on Contract No to be	paid to the
e use and benefit of the	e Appoquinimink School District for which	payment well
ves, our and each of o	ur heirs, executors, administrators, and succe	essors, jointly
y by these presents.		
ICATION IS SHOUTH	nat if the above boundar Principal who has s	ubmitted to th
0		
		i proposai,
to be and remain in fu	ill force and virtue.	
this day of	in the year of our Lord tw	vo thousand
RESENCE OF		
Nam	as of Biddon (Onconination)	
INali	le of bluder (Organization)	
By:		
-		
Title		
Name of Surety		
runne er eurety		
_		
Title		
	as Surety, legation as Surety, legation of as Surety, legation of sure and to exceed) of amount of bide use and benefit of the lives, our and each of one of y by these presents. IGATION IS SUCH The ract for the furnishing ipal shall well and truited by the Appoquinical notice of the award to be and remain in fulfithing day of RESENCE OF Name of Surety Name of Surety	IGATION IS SUCH That if the above bounden Principal who has so ract for the furnishing of certain material and/or services within the ipal shall well and truly enter into and execute this Contract as may wed by the Appoquinimink School District this Contract to be enterial notice of the award thereof in accordance with the terms of said to be and remain in full force and virtue. If thisday of in the year of our Lord two research and the property in the grant of th

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle:	nen:
We, the	
	(Surety Company's Address)
a Suret	y Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	ded the Contract No
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By
	(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or printe	d):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of	20	_•
My Commission expires	NOTARY PUBLIC		<u>.</u>

Contract: A-22: Theater Rigging & Stage Curtains

BID FORM

For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
·		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.):(A copy of Bidder's Delaware Business License must b	e attached	to this form.)
Phone No.: ()		Fax No.: ()
accordance therewith, that he has visited the site and Work is to be performed, and that his bid is based up	d has famili pon the ma agrees to p	ds the Bidding Documents and that this bid is made in iarized himself with the local conditions under which the iterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, ribed by the aforesaid documents for the lump sum
1. LUMP SUM PRICE FOR THE CONTRACT	T WORK	\$
2. LUMP SUM PRICE FOR BIM COORDINA	TION	<u>\$</u>
TOTAL BASE BID AMOUNT		
\$		(\$)
\$(TOTAL AMOUNT IN WRITTEN WORDS	S)	(\$) (AMOUNT IN DOLLARS & CENTS)
	5)	(\$) (AMOUNT IN DOLLARS & CENTS)
(TOTAL AMOUNT IN WRITTEN WORDS	cation section	on. Refer to specifications for a complete description of the
(TOTAL AMOUNT IN WRITTEN WORDS ALTERNATES Alternate prices conform to applicable project specific	cation section	on. Refer to specifications for a complete description of the

Alternate No. 12: BIM in Lieu of Traditional Coordinated Shop Drawing	gs.	
Add/Deduct	(\$)
UNIT PRICES:		
Unit prices conform to applicable project specification section. Refer to the state of the state	specifications for a complete	description of the
$\underline{\text{NOTE}}$: The difference in price between Add and Deduct in the above Unit (15%).	: Prices should not exceed fift	een percent
I/We acknowledge Addendums numberedcost/schedule impact they may have.	and the price(s) subm	itted include any
This bid shall remain valid and cannot be withdrawn for sixty (60) days the shall abide by the Bid Security forfeiture provisions. Bid Security is attache	. 0	the undersigned

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
ness Address:	
ness:	By:
(41)	(Authorized Signature)
EAL)	
	(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Theater Rigging			
2. Stage Curtains			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, le	gally authorized to do business in the State	of Delaware
('State"), are held and firmly unto	the Appoquinimink Scho	ol District in the sum of	
Dollars (S)	, or percent not to exceed	on Contract Noto	
Dollars (S) of amount of bio	on Contract No to	be paid to the
		e Appoquinimink School District for which	
		ur heirs, executors, administrators, and suc	cessors, jointly
and severally for and in the whol	e firmly by these presents.		
		nat if the above bounden Principal who has	
		of certain material and/or services within the	
	•	ly enter into and execute this Contract as m	
		mink School District this Contract to be en	
		d thereof in accordance with the terms of sa	iid proposal,
then this obligation shall be void	or else to be and remain in fo	ıll force and virtue.	
Cooled on the	A Artical (India)		t (1 1
and(20_	d dated thisday of	in the year of our Lord	two thousand
and(20_	_).		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nar	ne of Bidder (Organization)	
Composato	D		
Corporate Seal	Authorized Sig	naturo	
	Authorized Sig	nature	
Attest	Title		
	Title		
	Name of Surety		
Witness	rumine of currery		
	Title		

		CONSENT OF SURETY
DATE_		
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	<u> </u>
Gentle	men:	
We, the	e	
	(Surety Compan	y's Address)
a Suret	ty Company authorized to do business in	n the State of Delaware hereby agrees that if
		(Contractor)
		(Address)
is awa	rded the Contract No.	
	ll write the required Performance and/or	r Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)	
	By	

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
_			
Authorized Representative (typed or prir	ited):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this _	day of	20	·
My Commission expires	NOTARY PUBL	IC	

Contract: A-23: Theater Seating

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - _____ Fax No.: () _____ - ____ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

у	Trading as
(Individual's / General Partner's / Cor	rporate Name)
(State of Corporation)	
siness Address:	
	By:
tness:	· ·
EEAL)	(Authorized Signature) (Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID #
		•	or Delaware Business license #
1. Theater Seating			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE		
UTHORIZED REPRESENTATIVE SIGNATURE):		
TTLE:		
NUMBER NUMBER		
worn to and Subscribed before me this	day of	20
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	e of Delaware
('State"), are held and firmly unt	o the Appoquinimink Schoo	l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of ou	Appoquinimink School District for white theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing of d Principal shall well and truly approved by the Appoquinit of official notice of the award or else to be and remain in full d dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be e thereof in accordance with the terms of s ll force and virtue. in the year of our Lord	the State, shall be nay be required entered into said proposal,
and(20).		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	By:		
Seal	Authorized Sign		
Attest			
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	nen:
We, the	
	(Surety Company's Address)
a Suret	Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	led the Contract No.
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	Ву
	(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
_		
_		
Authorized Representative (typed or pri	inted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this	day of	
My Commission expires	NOTARY PUBLIC	

Contract: A-24: Elevators BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - ____ Fax No.: (Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as	
(Individual's / General Part		
(State of Corporation)		
iness Address:		
·		
ta acci	D.v.	
ness.	By: By: (Authorized Signature)	
EAL)	(Title)	

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
			of Delaware Dusiness license #
1. Elevators			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-</i>	24: Elevators have been thoroughly examined and are understand	ood.
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE (TYPED):		
AUTHORIZED REPRESENTATIVE (SIGNATURE):		
TITLE:		
ADDRESS OF BIDDER:		
PHONE NUMBER:		
Sworn to and Subscribed before me this	day of2	20
My Commission expires	. NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
		and State of	as
		in the County of	
and State of	as Surety, leg	gally authorized to do business in the State of	of Delaware
('State"), are held and firmly unt	o the Appoquinimink School	l District in the sum of	
Dollars (S), or percent not to exceed		
		on Contract No to l	
	d ourselves, our and each of o	e Appoquinimink School District for which ur heirs, executors, administrators, and succ	
a certain proposal to enter into the awarded this Contract, and if sailing the terms of this Contract and within twenty days after the date then this obligation shall be void	nis contract for the furnishing d Principal shall well and trul approved by the Appoquini e of official notice of the award or else to be and remain in fu	nat if the above bounden Principal who has of certain material and/or services within the y enter into and execute this Contract as material and Execute this Contract to be end thereof in accordance with the terms of satell force and virtue.	ne State, shall be ay be required ntered into id proposal,
sealed, and delivered in	_).		
	Nam	ne of Bidder (Organization)	
Corporate	-		
Seal	Authorized Sigr	nature	
Attest	Title		
	Name of Surety		
Witness			
	- Trial		
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle:	nen:
We, the	
	(Surety Company's Address)
a Suret	Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	ded the Contract No
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By
	(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or printe	d):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of	20	_•
My Commission expires	NOTARY PUBLIC		<u>.</u>

Contract: A-25: Kitchen Equipment

BID FORM

For Bids Due:	То:	Appoquinimink School District
		118 South Sixth Street
		Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.):		
(A copy of Bidder's Delaware Business Licen	se must be attached t	o this form.)
Phone No.: ()		Fax No.: ()
The undersigned, representing that he has a	read and understand	ls the Bidding Documents and that this bid is made in
· ·		arized himself with the local conditions under which the
-	•	terials, systems and equipment described in the Bidding
1 , 1		rovide all labor, materials, plant, equipment, supplies,
transport and other facilities required to ex- itemized below:	ecute the work descr	ibed by the aforesaid documents for the lump sum
nemized below.		
1. LUMP SUM PRICE FOR THE CO	NTRACT WORK	\$
2. LUMP SUM PRICE FOR BIM CO	ORDINATION	<u>\$</u>
TOTAL BASE BID AMOUNT		
\$_		(\$)
(TOTAL AMOUNT IN WRITTEN	WORDS)	(AMOUNT IN DOLLARS & CENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
ness Address:	
ness:	By:
(41)	(Authorized Signature)
EAL)	
	(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Kitchen Equipment_			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE TYPED):		
UTHORIZED REPRESENTATIVE SIGNATURE):		
TTLE:		
ADDRESS OF BIDDER:		
PHONE NUMBER:		
Sworn to and Subscribed before me this	day of	20
My Commission expires	. NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of o	Appoquinimink School District for whin heirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing of Principal shall well and trul approved by the Appoquini are of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be ell thereof in accordance with the terms of soll force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20).		
CEALED AND DELIVEDED IN	THE DDECENIOR OF		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest	8		
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY	
DATE_		
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	
Gentle	ien:	
We, th		
	(Surety Company's Address)	
a Suret	Company authorized to do business in the State of Delaware hereby agrees that if	
	(Contractor)	_
	(Address)	
is awaı	led the Contract No.	
	write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to	
	(Surety Company)	
	By	

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Authorized Representative (typed or pri	nted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	<u>.</u>

Contract: A-26: Fire Protection

	Jiiiiuci. 11 20 . 1	iic i iotectioii	•
	BID FO	<u>RM</u>	
For Bids Due:	To:		mink School District Sixth Street 19730
Name of Bidder:			
Bidder Address:			
Contact Name:		E-Mail Add	dress:
Delaware Business License No.:		Taxpayer II	O No.:
(Other License Nos.): (A copy of Bidder's Delaware Business License m	ust be attached	to this form.)	
Phone No.: ()		Fax No.: ()
The undersigned, representing that he has read accordance therewith, that he has visited the sit Work is to be performed, and that his bid is bas Documents without exception, hereby proposes transport and other facilities required to execute itemized below:	re and has famili red upon the ma s and agrees to p	iarized himsel terials, system provide all lab	If with the local conditions under which the ns and equipment described in the Bidding oor, materials, plant, equipment, supplies,
3. LUMP SUM PRICE FOR THE CONTR	RACT WORK		\$
4. LUMP SUM PRICE FOR BIM COORE	OINATION		<u> </u>
TOTAL BASE BID AMOUNT			
\$			(\$

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 12: BIM in Lieu of Traditional Coordinated Shop Drawings

(TOTAL AMOUNT IN WRITTEN WORDS)

Add/Deduct	(\$	

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

·	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
siness Address:	
itness:	By:
	(Authorized Signature)
EAL)	(Title)
ח	ate:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Fire Protection		_	

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

day of	20
NOTARY PUBLIC	
	day of

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That:in the County of		of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State of	of Delaware
		l District in the sum of	
Dollars (S)	, or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to b	be paid to the
	ourselves, our and each of ou	Appoquinimink School District for which ar heirs, executors, administrators, and succ	
a certain proposal to enter into the awarded this Contract, and if said by the terms of this Contract and	is contract for the furnishing of Principal shall well and trulapproved by the Appoquinit of official notice of the award	at if the above bounden Principal who has of certain material and/or services within the yenter into and execute this Contract as manink School District this Contract to be end thereof in accordance with the terms of sail force and virtue.	ne State, shall be ay be required ntered into
Sealed withseal an and(20_		in the year of our Lord t	wo thousand
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal Attest	Authorized Sign		
	Title		
Witness	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle:	men:
We, the	e
	(Surety Company's Address)
a Suret	ry Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Contractor/Subcontractor Address:		
_		
_		
_		
Authorized Representative (typed or prin	ted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	

Contract: A-27: Plumbing

	BID FO	<u>RM</u>
For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
		EM IAII
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
Other License Nos.): (A copy of Bidder's Delaware Business License must	be attached	to this form.)
Phone No.: ()		Fax No.: ()
accordance therewith, that he has visited the site ar Work is to be performed, and that his bid is based under the proposes and the proposes are the proposes a	nd has famili upon the ma d agrees to p	ds the Bidding Documents and that this bid is made in arized himself with the local conditions under which the terials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, ribed by the aforesaid documents for the lump sum
3. LUMP SUM PRICE FOR THE CONTRAC	T WORK	\$
4. LUMP SUM PRICE FOR BIM COORDIN	ATION	<u>\$</u>
TOTAL BASE BID AMOUNT		
5		(\$)
(TOTAL AMOUNT IN WRITTEN WORD	OS)	(AMOUNT IN DOLLARS & CENTS)
<u>ALTERNATES</u>		(AMOUNT IN DOLLARS & CENTS)
<u>ALTERNATES</u>	ication section	(AMOUNT IN DOLLARS & CENTS) on. Refer to specifications for a complete description of the
<u>ALTERNATES</u> Alternate prices conform to applicable project specif	ication section tis indicated	(AMOUNT IN DOLLARS & CENTS) on. Refer to specifications for a complete description of the by the crossed out part that does not apply.

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

У	Trading as
(Individual's / General Partner's / Corporate Name)
(State of Corporation)	
iness Address:	
tness:	
EAL)	(Authorized Signature)
	(Title)
	(Title)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Plumbing		_	
2. Insulation			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-27 : Plu</i>	<i>ambing</i> have been thoroughly examined an	d are understood
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE TYPED):		
AUTHORIZED REPRESENTATIVE SIGNATURE):		
TITLE:		
PHONE NUMBER:		
sworn to and Subscribed before me this	day of	20
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
('State"), are held and firmly unt	o the Appoquinimink Schoo	l District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract Noto	be paid to the
	d ourselves, our and each of ou	Appoquinimink School District for white theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if sail by the terms of this Contract and within twenty days after the date then this obligation shall be void. Sealed withseal ar	nis contract for the furnishing of d Principal shall well and truly approved by the Appoquinit of official notice of the award or else to be and remain in full d dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be e I thereof in accordance with the terms of s Il force and virtuein the year of our Lord	the State, shall be nay be required entered into said proposal,
and(20).		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	By:		
Seal	Authorized Sign		
Attest			
	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, the	e
	(Surety Company's Address)
a Suret	y Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awar	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Contractor/Subcontractor Address:		
Authorized Representative (typed or pr	rinted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this	day of	
My Commission expires	NOTARY PUBLIC	<u>.</u>

Contract: A-28: Mechanical

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): (A copy of Bidder's Delaware Business License must be attached to this form.) Fax No.: () ______-Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 3. LUMP SUM PRICE FOR THE CONTRACT WORK 4. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT (TOTAL AMOUNT IN WRITTEN WORDS) (AMOUNT IN DOLLARS & CENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 12: BIM in Lieu of Traditional Coordinated Shop Drawings

Add/Deduct _____ (\$_____

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

y	Trading as
(Individual's / General Partner's / Corpo	orate Name)
(State of Corporation)	
siness Address:	
ika ana	D
tness:	By: (Authorized Signature)
	` '
GEAL)	

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
<u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Mechanical			
2. Ductwork			
3. Insulation			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A</i> -	-28: Mechanical have been thoroughly examined and are und	lerstood.
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE (TYPED):		
AUTHORIZED REPRESENTATIVE (SIGNATURE):		
TITLE:		
ADDRESS OF BIDDER:		
PHONE NUMBER:		
Sworn to and Subscribed before me this	day of	_20
My Commission expires	NOTARY PUBLIC	·

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE P	RESENTS That:	of	
	in the County of	of and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
('State"), are held and firmly un	to the Appoquinimink School	District in the sum of	
Dollars (S), or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to	be paid to the
	d ourselves, our and each of ou	Appoquinimink School District for white theirs, executors, administrators, and such	
a certain proposal to enter into the awarded this Contract, and if same by the terms of this Contract and within twenty days after the date then this obligation shall be void Sealed withseal ar	his contract for the furnishing old Principal shall well and truly approved by the Appoquinit e of official notice of the award or else to be and remain in fund dated thisday of	at if the above bounden Principal who has of certain material and/or services within to y enter into and execute this Contract as mink School District this Contract to be earl thereof in accordance with the terms of soll force and virtue. in the year of our Lord	the State, shall be nay be required entered into aid proposal,
and(20).		
	THE PRESENCE OF		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest	8		
	Title		
	Name of Surety	_	
Witness			
	 Title		
	1100		

	CONSENT OF SURETY
DATE_	
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, the	e
	(Surety Company's Address)
a Suret	ry Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awaı	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or pr	rinted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of		
My Commission expires	NOTARY PUBLIC	<u>.</u>	

Contract: A-29: Building Management Systems

BID FORM For Bids Due: Appoquinimink School District To: 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.:_____ Taxpayer ID No.: (Other License Nos.): _____ (A copy of Bidder's Delaware Business License must be attached to this form.)) ______ - _____ Fax No.: () _____ - ____ Phone No.: (The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below: 1. LUMP SUM PRICE FOR THE CONTRACT WORK 2. LUMP SUM PRICE FOR BIM COORDINATION TOTAL BASE BID AMOUNT

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

·	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
iness Address:	
tness:	
EAL)	(Authorized Signature)
	(Title)
D	ate:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>			
Category	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Building Mgmt.			
System			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That:		of	
j	in the County of	and State of	as
Principal, and	of	in the County of	
		, legally authorized to do business in the State o	
		chool District in the sum of	
Dollars (S)	, or percent not to exceed	bid on Contract Noto b	
Dollars (S) of amount of	bid on Contract No to b	e paid to the
Appoquinimink School District	for the use and benefit of	f the Appoquinimink School District for which	h payment well
and truly to be made, we do bind	ourselves, our and each	of our heirs, executors, administrators, and succ	essors, jointly
and severally for and in the whol	e firmly by these present	s.	
NOW THE CONDITION OF TH	IS OBLIGATION IS SUC	H That if the above bounden Principal who has s	submitted to the
		ning of certain material and/or services within th	
1 1		truly enter into and execute this Contract as ma	
		uinimink School District this Contract to be en	
		ward thereof in accordance with the terms of sai	
then this obligation shall be void			a proposar,
aren ans confacion shan se void	or cloc to be und remain	in fair force and virtue.	
Sealed with seal and	d dated this day of	in the year of our Lord to	wo thousand
and(20_			
	- - /		
SEALED, AND DELIVERED IN	ΓHE PRESENCE OF		
	-	Name of Bidder (Organization)	
		Name of bluder (Organization)	
Corporate	Ву:		
Seal	Authorized	Signature	
Attest			
	Title		
	Name of Su	rety	
Witness		,	
	Title		

		CONSENT OF SURETY
DATE		
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	
Gentle	emen:	
We, th	e	
	(Surety Company	y's Address)
a Sure	ty Company authorized to do business in	n the State of Delaware hereby agrees that if
		(Contractor)
		(Address)
is awa	rded the Contract No.	
	ll write the required Performance and/or	Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)	
	Ву	

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or pri	inted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of		
My Commission expires	NOTARY PUBLIC	<u>.</u>	

Contract: A-30: Electrical

	BID FO	<u>'RM</u>
For Bids Due:	To:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.): (A copy of Bidder's Delaware Business Licen	se must be attached	to this form.)
Phone No.: ()		Fax No.: ()
accordance therewith, that he has visited the Work is to be performed, and that his bid is Documents without exception, hereby prop	e site and has famili based upon the ma poses and agrees to p	ds the Bidding Documents and that this bid is made in iarized himself with the local conditions under which the iterials, systems and equipment described in the Bidding provide all labor, materials, plant, equipment, supplies, ribed by the aforesaid documents for the lump sum
1. LUMP SUM PRICE FOR THE CO	NTRACT WORK	\$
2. LUMP SUM PRICE FOR BIM CO	ORDINATION	<u>\$</u>
TOTAL BASE BID AMOUNT		
\$(TOTAL AMOUNT IN WRITTEN	WORDS)	(\$) (AMOUNT IN DOLLARS & CENTS)
ALTERNATES Alternate prices conform to applicable projection following Alternates. An "ADD" or "DEDUCT Alternate No. 6: Lightning Protection Systems."	" amount is indicated	on. Refer to specifications for a complete description of the by the crossed out part that does not apply.
		(d)
Add/Deduct		(\$)

Alternate No. 7: Orchestra Shell		
Add/Deduct	(\$)
Alternate No. 12: BIM in Lieu of Traditional Coordinated Sho	p Drawings	
Add/Deduct	(\$)
UNIT PRICES:		
Unit prices conform to applicable project specification section. Refollowing Unit Prices:	efer to the specifications for a complete	description of the
NOTE: The difference in price between Add and Deduct in the (15%).	above Unit Prices should not exceed fift	teen percent
I/We acknowledge Addendums numberedcost/schedule impact they may have.	and the price(s) subm	itted include any
This bid shall remain valid and cannot be withdrawn for sixty (60 shall abide by the Bid Security forfeiture provisions. Bid Security		the undersigned
The Owner shall have the right to reject any or all bids, and to wa	aive any informality or irregularity in a	ny bid received.
This bid is based upon work being accomplished by the Sub-Cor	atractors named on the list attached to t	his bid.
The undersigned represents and warrants that he has complied a national laws; that no legal requirement has been or shall be violated contract to him or in the prosecution of the work required; that the	ated in making or accepting this bid, in	awarding the

indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free

competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

By	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
Business Address:	
Vitness:	Ву:
(SEAL)	(Authorized Signature)
SEAL)	(Title)
5	ate:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
1. Electrical			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-30 : Ele</i>	ectrical have been thoroughly examined and	d are understood
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE TYPED):		
AUTHORIZED REPRESENTATIVE SIGNATURE):		
TITLE:		
PHONE NUMBER:		
worn to and Subscribed before me this	day of	20
My Commission expires	NOTARY PUBLIC	

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PI	RESENTS That:	of	
		and State of	as
		in the County of	
and State of	as Surety, leg	gally authorized to do business in the State of	of Delaware
('State"), are held and firmly unt	o the Appoquinimink School	l District in the sum of	
Dollars (S), or percent not to exceed		
		on Contract No to l	
	d ourselves, our and each of o	e Appoquinimink School District for which ur heirs, executors, administrators, and succ	
a certain proposal to enter into the awarded this Contract, and if sailing the terms of this Contract and within twenty days after the date then this obligation shall be void	nis contract for the furnishing d Principal shall well and trul l approved by the Appoquini e of official notice of the award or else to be and remain in fu	nat if the above bounden Principal who has of certain material and/or services within the y enter into and execute this Contract as material and Execute this Contract to be end thereof in accordance with the terms of satell force and virtue.	ne State, shall be ay be required ntered into id proposal,
sealed, and delivered in	_).		
	Nam	ne of Bidder (Organization)	
Corporate	-		
Seal	Authorized Sigr	nature	
Attest	Title		
	Name of Surety		
Witness			
	- Trial		
	Title		

	CONSENT OF SURETY	
DATE	E	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	
Gentle	emen:	
We, th	he	
	(Surety Company's Address)	
a Suret	ety Company authorized to do business in the State of Delaware hereby agrees that if	
	(Contractor)	
	(Address)	
is awa	arded the Contract No	
	rill write the required Performance and/or Labor and Material Bond required by Paragraph	9 of the Instructions to
	(Surety Company)	
	By(Attorney-in-Fact)	

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or pri	inted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of		
My Commission expires	NOTARY PUBLIC	<u>.</u>	

Contract: A-31: Structured Cable

	BID FOR	<u>RM</u>
For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:	_	E-Mail Address:
Delaware Business License No.:	_	Taxpayer ID No.:
Other License Nos.): (A copy of Bidder's Delaware Business License must be a	ttached to	o this form.)
Phone No.: ()	:	Fax No.: ()
	as familianthe the the the the the the the the the	arized himself with the local conditions under which the erials, systems and equipment described in the Bidding rovide all labor, materials, plant, equipment, supplies,
1. LUMP SUM PRICE FOR THE CONTRACT W	VORK	\$
2. LUMP SUM PRICE FOR BIM COORDINATI	ON—	\$
TOTAL BASE BID AMOUNT		

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

у	Trading as
(Individual's / General Partner's	/ Corporate Name)
(State of Corporation)	
A 11	
siness Address:	
	By:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u>				
<u>Category</u>	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #	
			or Delaware Business license #	
1. Structured Cable				

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

day of	20
ady or	20
	day of

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That:in the County of		of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		l District in the sum of	
Dollars (S)	, or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to l	be paid to the
	ourselves, our and each of ou	Appoquinimink School District for which ar heirs, executors, administrators, and succ	
a certain proposal to enter into the awarded this Contract, and if said by the terms of this Contract and	is contract for the furnishing of Principal shall well and truly approved by the Appoquinit of official notice of the award	at if the above bounden Principal who has of certain material and/or services within the yenter into and execute this Contract as manink School District this Contract to be end thereof in accordance with the terms of sall force and virtue.	he State, shall be ay be required ntered into
Sealed withseal and(20_		in the year of our Lord t	wo thousand
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal	Authorized Sign		
Attest	Title		
	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, th	e
	(Surety Company's Address)
a Sure	ty Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awa	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:			
Authorized Representative (typed or pri	inted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this	day of		
My Commission expires	NOTARY PUBLIC	<u>.</u>	

Contract: A-32: Special Systems

	BID FC	<u>DRM</u>
For Bids Due:	То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
accordance therewith, that he has visited the site and Work is to be performed, and that his bid is based up	understand has famil bon the ma	Fax No.: ()
1. LUMP SUM PRICE FOR THE CONTRACT	WORK	\$
2. LUMP SUM PRICE FOR BIM COORDINA	TION	<u>\$</u>
TOTAL BASE BID AMOUNT		
\$		(\$)
(TOTAL AMOUNT IN WRITTEN WORDS	,)	(AMOUNT IN DOLLARS & CENTS)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered ______ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

_
- -
-
zed Signature)

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

21 February 2020 Addendum No. 4

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

<u>Subcontractor</u> <u>Category</u>	Subcontractor	Address (City & State)	Subcontractors tax payer ID # or Delaware Business license #
Electronic Safety And Security			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	ofofand State of	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
		l District in the sum of	
Dollars (S)	, or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to I	be paid to the
	ourselves, our and each of ou	Appoquinimink School District for which ar heirs, executors, administrators, and succ	
a certain proposal to enter into the awarded this Contract, and if said by the terms of this Contract and	is contract for the furnishing of I Principal shall well and truly approved by the Appoquinit of official notice of the award	at if the above bounden Principal who has of certain material and/or services within the yenter into and execute this Contract as manink School District this Contract to be end thereof in accordance with the terms of sall force and virtue.	ne State, shall be ay be required ntered into
Sealed withseal and(20_		in the year of our Lord t	wo thousand
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal Attest	Authorized Sign		
	Title		
Witness	Name of Surety		
Witness			
	Title		

	CONSENT OF SURETY
DATE	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, th	e
	(Surety Company's Address)
a Sure	y Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awa	rded the Contract No.
	ll write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Contractor/Subcontractor Address:		
_		
_		
Authorized Representative (typed or prin	ted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

Contract: A-33: Testing & Balancing

BID FORM

For Bids Due:	To:	Appoquinimink School District
		118 South Sixth Street
		Odessa, De 19730
Name of Bidder:		
Bidder Address:		
Contact Name:		E-Mail Address:
Delaware Business License No.:		Taxpayer ID No.:
(Other License Nos.): (A copy of Bidder's Delaware Business License must be a		
(A copy of Bidder's Delaware Business License must be a	attached	to this form.)
Phone No.: ()		Fax No.: ()
The undersigned, representing that he has read and ur	nderstand	ds the Bidding Documents and that this bid is made in
		iarized himself with the local conditions under which the
Work is to be performed, and that his bid is based upo	n the ma	terials, systems and equipment described in the Bidding
	-	provide all labor, materials, plant, equipment, supplies,
transport and other facilities required to execute the weitemized below:	ork desc	ribed by the aforesaid documents for the lump sum
1. LUMP SUM PRICE FOR THE CONTRACT V	VORK	\$
2. LUMP SUM PRICE FOR BIM COORDINAT	ION	\$
TOTAL BASE BID AMOUNT		
\$		(\$)

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

(TOTAL AMOUNT IN WRITTEN WORDS)

(AMOUNT IN DOLLARS & CENTS)

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

	Trading as
(Individual's / General Partner's / Corporate Name)	
(State of Corporation)	
-t A 11	
iness Address:	
itness:	
EAL)	(Authorized Signature)
	(Title)
ח	ate:

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
			or Delaware Business license #
1. Testing & Balancing	<u> </u>		

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-33 : T</i> understood.	esting & Balancing have been thoroughly e	xamined and are
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE (TYPED):		
AUTHORIZED REPRESENTATIVE (SIGNATURE):		
TITLE:		
ADDRESS OF BIDDER:		
PHONE NUMBER:		
Sworn to and Subscribed before me this	day of	20
My Commission expires	. NOTARY PUBLIC	

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	ofof	as
Principal, and	of	in the County of	
and State of	as Surety, leg	ally authorized to do business in the State	of Delaware
('State"), are held and firmly unto	the Appoquinimink Schoo	1 District in the sum of	
Dollars (S)	, or percent not to exceed		
Dollars (S) of amount of bid	on Contract No to l	be paid to the
	ourselves, our and each of ou	Appoquinimink School District for which theirs, executors, administrators, and successive successive security.	
a certain proposal to enter into the awarded this Contract, and if said by the terms of this Contract and	is contract for the furnishing of Principal shall well and trulapproved by the Appoquinit of official notice of the award	at if the above bounden Principal who has of certain material and/or services within the yenter into and execute this Contract as maink School District this Contract to be end thereof in accordance with the terms of sall force and virtue.	he State, shall be ay be required ntered into
Sealed withseal an and(20_		in the year of our Lord t	two thousand
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nam	e of Bidder (Organization)	
Corporate	Bv:		
Seal Attest	Authorized Sign		
	Title		
Witness	Name of Surety		
Witness			
	Title		

		CONSENT OF SURETY
DATE_		
Го:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730	
Gentle:		
vve, tn	e	
	(Surety Company's	Address)
a Suret	ty Company authorized to do business in t	he State of Delaware hereby agrees that if
		(Contractor)
		(Address)
is awaı	rded the Contract No.	
	ll write the required Performance and/or L	abor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)	
	Bv	

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name:		
Authorized Representative (typed or pri	nted):	
Authorized Representative (signature):		
Title:		
Sworn to and Subscribed before me this _	day of	
My Commission expires	. NOTARY PUBLIC	·

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

(Other License Nos.): ____

Phone No.: (

(A copy of Bidder's Delaware Business License must be attached to this form.)

) ______ - ____ Fax No.: (

Contract: A-34: Telephone System

For Bids Due: To: Appoquinimink School District 118 South Sixth Street Odessa, De 19730 Name of Bidder: Bidder Address: Contact Name: E-Mail Address: Delaware Business License No.: Taxpayer ID No.:

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

	(TOTAL AMOUNT IN WRITTEN WORDS)	(AMOUNT IN DOLLARS & CENTS)
		(\$
	TOTAL BASE BID AMOUNT	
2.	LUMP SUM PRICE FOR BIM COORDINATION	<u>\$</u>
1.	LUMP SUM PRICE FOR THE CONTRACT WORK	\$

ALTERNATES

\$

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

UNIT PRICES:

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

<u>NOTE</u>: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for sixty (60) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

y	Trading as
(Individual's / General Partner's / Corpo	rate Name)
(State of Corporation)	
siness Address:	
ha a car	D
tness:	By: By: (Authorized Signature)
itness:EAL)	

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Affidavit of Employee Drug Testing Program
Delaware Business License
New Castle County Contractor's License

(Others as Required by Project Manuals)

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b <u>Delaware Code</u>, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Subcontractor			
Category	<u>Subcontractor</u>	Address (City & State)	Subcontractors tax payer ID #
<i>.</i>		. ,	or Delaware Business license #
1. Telephone System			

The subcontractor listing above was reviewed and unanimously agreed upon at the Pre-Bid Meeting held on 18 March 2020. The listing, as so published, shall be final and binding upon all bidders and the Appoquinimink School District and it shall be filled out completely, in full, without any abbreviations. No additions or alterations to this listing will be considered. (ADDENDUM NO. 4)

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date

All the terms and conditions of <i>Contract: A-3</i>	4: Telephone System have been thoroughly exam	nined and are understo
NAME OF BIDDER:		
AUTHORIZED REPRESENTATIVE		
UTHORIZED REPRESENTATIVE GIGNATURE):		
ITLE:		
		_
HONE NUMBER:		
worn to and Subscribed before me this	day of	20
My Commission expires	. NOTARY PUBLIC	

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

BID BOND

TO ACCOMPANY PROPOSAL (Not necessary if security is used)

KNOW ALL MEN BY THESE PR	ESENTS That:	of	
	in the County of	and State of	as
Principal, and	of	in the County of	
and State of	as Surety, le	gally authorized to do business in the State	of Delaware
		ol District in the sum of	
Dollars (S)	, or percent not to exceed	on Contract No to	
Dollars (S) of amount of bid	on Contract No to	be paid to the
		e Appoquinimink School District for which	
•		our heirs, executors, administrators, and suc	cessors, jointly
and severally for and in the whol	e firmly by these presents.		
NOW THE CONTRIBUTION OF THE			1 11
		hat if the above bounden Principal who has	
		of certain material and/or services within the	
	-	ly enter into and execute this Contract as m	
		mink School District this Contract to be en	
		d thereof in accordance with the terms of sa	ıid proposal,
then this obligation shall be void	or else to be and remain in fo	ıll force and virtue.	
Cooled with	d datad this day of	in the group of our I and	trura thansand
and(20_	u dated thisday of	in the year of our Lord	two triousariu
and(20_	_)·		
SEALED, AND DELIVERED IN	THE PRESENCE OF		
	Nar	ne of Bidder (Organization)	
	D.		
Corporate	By:		
Seal	Authorized Sig	nature	
Attest			
	Title		
	Name of Surety		
Witness	realite of Surety		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Title		

	CONSENT OF SURETY
DATE	
То:	Appoquinimink School District 118 South Sixth Street Odessa, De 19730
Gentle	men:
We, th	
	(Surety Company's Address)
a Sure	y Company authorized to do business in the State of Delaware hereby agrees that if
	(Contractor)
	(Address)
is awa	rded the Contract No.
	l write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to
	(Surety Company)
	By

(Attorney-in-Fact)

AFFIDAVIT OF EMPLOYEE DRUG TESTING PROGRAM

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

Contractor/Subcontractor Name: _			
Contractor/Subcontractor Address: _			
_			
Authorized Representative (typed or prin	nted):		
Authorized Representative (signature):			
Title:			
Sworn to and Subscribed before me this _	day of		
My Commission expires	NOTARY PUBLIC	<u>.</u>	

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

END OF SECTION

BIM EXECUTION PLAN

Everett Meredith Middle School 504 South Broad Street Middletown, DE 19709

Appoquinimink School District



EDiS Company and EDiS BIM Services



BIM PROCESS IS MANDATORY

SECTION 013700 - BIM COORDINATION

CONTRACTOR 3D MODEL RESPONSIBILITY

The purpose of a three-dimensional model is to aid in project review development. Contractor and it's sub-contractors, as part of the Everett Meredith Middle School project, shall hold all responsibility to adhere to AIA G202-2013 Project Building Information Modeling Protocol Form Matrix (see Exhibit 1 and referenced attachments) while creating their BIM model respectively. This BIM model shall reflect the two-dimensional contract drawings provided in bidding package, RFI, and ASI. The Contractor's referenced and shared three-dimensional model is only utilized as a visual aid to begin per matrix LOD required by Contractor.

- 1A. Architect and their consultants will Furnish Contractor one set of Revit 2019 Building Information Modeling files (BIM) of Drawing for use in preparing coordination digital data files.
 - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to drawings.
 - b. Digital data software program: Drawings are available in Revit 2019 digital data software working on the Windows operating system. Sheet views will be deleted to protect the architect and consultants. Full model will be available for coordination.
 - c. Contractor shall execute a data licensing agreement in the form of the agreement included in the project manual.
 - d. The Contractor and its prime contractors are responsible to execute all licensing for requested software to coordinate the project.
- 1B. BIM File Incorporation: Develop and incorporate coordination drawing information into Building Information Model established for Project.
 - a. Each of the Prime Contractors shall model their respective systems in the BIM model that are part of their contract and provide updated files to the HVAC contractor.
 - b. The HVAC contractor (Prime Coordinator) shall perform three-dimensional component conflict analysis as part of the preparation of coordination drawings. Resolve component conflicts with each Prime prior to submittal. Indicate where conflict resolution requires modification of design requirements by Architect and obtain approval of Architect.
 - c. HVAC contractor shall revise the BIM model as necessary to reflect the coordination changes. HVAC contractor shall pay for the cost of revisions to the BIM model. HVAC contractor shall include all cost due to the revisions of project changes such as but not limited to RFI, ASI's and owner changes. All modifications, enhancements, additions, and changes to structural, mechanical, electrical, plumbing, fire protection, or HVAC components shall be made by the respective Prime Contractors responsible for that system as part of their contract.

2. DEFINITIONS

2.1. **Base Structural Model** – the structural steel mill order drawing file showing all structural elements. This model is not necessarily fully detailed with all connections.

- 2.2. **Base Architectural Model** a combination of the Base Structural Model and key architectural elements. This model is to be used by all coordination participants as the background file in which to develop their work. No information within this model will be changed through the coordination process. It is for reference only.
- 2.3. **Base Composite Model** this model includes all trade drawing files within the Base Architectural Model as a representation of the completed systems. This model is used to run the intermediate clash reports and is considered a work in progress.
- 2.4. **Final Coordination Model** this model shows all trades' systems fully coordinated within the Base Architectural Model. All clashes have been resolved. No further coordination is required. The work shown within this model represents the upcoming installations of each system.
- 2.5. Completed Coordination Model this model is the close-out submittal to the Owner and includes the information within the Final Coordination Model as well as any project updates that have taken place during installations such as RFI responses, as-built conditions, etc.
- 2.6. **Building Information Model -** A Building Information Model(s) is a digital representation of the physical and functional characteristics of the Project and is referred to in this document as the "Model(s)," which term may be used herein to describe a Model Element, a single Model or multiple Models used in the aggregate. "Building Information Modeling" means the process and technology used to create the Model.
- 2.7. **Level of Development** The Level(s) of Development (LOD) describes the level of completeness to which a Model Element is developed.
- 2.8. **Model Element** A Model Element is a portion of the Building Information Model representing a component, system or assembly within a building or building site. Model Elements are represented by the Construction Specifications Institute (CSI) UniFormatTM classification system in the Model Element Table in Exhibit 1 Article 3.
- 2.9. **Model Element Author** The Model Element Author is the party responsible for developing the content of a specific Model Element to the LOD required for a particular phase of the Project. Model Element Authors are identified in the Model Element Table in Exhibit 1 Article 3.
- 2.10. **Model User** The Model User refers to any individual or entity authorized to use the Model on the Project for analysis, estimating, or scheduling.
- 2.11. **TCD** Trade contract drawings developed by MEP contractor.

3. COORDINATION DRAWING PROCESS – GENERAL REQUIREMENTS.

3.1. The coordination model shall be derived from the design base composite model which shall be in a (Program File Format – Ex: Revit 2017) format and utilized by all coordination participants. The A/E is to provide this base composite model as needed at each plan deliverable for coordination efforts. This model will be utilized to establish field installation sequence, resolve trade coordination issues prior to installation, and to make the most efficient use of installation space without sacrificing system performance for mechanical, electrical, structural and architectural systems. (Program File Format – Ex: NAVISWORKS or IFC) design review software will be used to document, identify and resolve interferences between all trades.

- 3.2. Communication is a critical element to the success of this coordination process. All project team members must be in constant communication to keep the process moving forward according to the sign-off schedule (5.1). Constant collaboration is expected of all team participants and each participant should be proactive in identifying and resolving design, engineering, and model interferences. Contractors avoiding the coordination process shall receive liquidated damages for missing meetings and negatively impacting project completion.
- 3.3. All trade contractors own their respective modeling for their contract work. EDiS Company will facilitate and lead the 3D coordination modeling process. It is the responsibility of all coordination participants to resolve discrepancies pertaining to their own model. All trades shall be responsible for collisions/clashes/coordination issues involving their respective trade(s) and proposed work. Coordinated work takes precedence over field routed systems. Each Contractor to provide LOD 350 total coordination models for sign off.
- 3.4. Coordination meetings will occur weekly starting TBD. Selected coordination team members are required to generate a clash-free model inclusive of all systems. The following participants are required to attend the weekly coordination meetings:
- 3.5. A mandatory coordination kick-off meeting for all participants will review; team collaboration, the execution process, the coordination schedule, establishing zones per system, use of the coordinated elements during construction, project specific information and requirements, and model/document standards.
- 3.6. Coordination meetings will be held at Virtual Goto Meeting to review the model's progress per the schedule and process indicated.
- 3.7. Utility corridors and above ceiling space for each trade, will be established by the group at the beginning of the process. These zones will be adjusted through the coordination process to meet installation requirements and feasibility.
- 3.8. All participants are required to identify the submittals required for accurate detailing of the coordination model (such as equipment, light fixtures, etc.) and to obtain final approval so the information can be incorporated into the modeling process.
- 3.9. The 3D coordination modeling process does not replace the standard submittal process and will not be considered as a submittal. Exceptions: The submittals issued to reflect the 3D model content issued to A/E.
- 3.10. Meeting Procedures:

NOTES: all contracted parties involved with coordination are required to sign off on all coordinated models via sign off TCD drawings. All clash reports issued to subcontractors require completion by next BIM meeting.

Meeting Type	Project Stage	Frequency	Participants	Location
BIM Requirement	Construction	Once	EDiS Team &	Site Trailer
Kick-off			Contracts #	
BIM	Construction	Weekly	EDiS Team &	Site Trailer
Coordination			Contracts #	
BIM Clash	Construction	Weekly	EDiS Team Issue	Site Trailer
Detection			to Contracts	
Field Installation	Construction	Weekly	EDiS Team &	Site Trailer
Process			Contracts #	
Coordination				
Meetings				
TCD Drawings	Construction	Weekly	Contracts	Site Trailer
			Mechanical	
Sign off on TCD	Construction	At	All Parties	Site Trailer
Drawings		completion	w/Contract	

3.11. The coordination meeting:

Company.

- 3.11.1. The purpose is to review and resolve items on the current clash report in conjunction with the project coordination schedule. The meetings will focus on clashes that cannot be resolved by internal collaboration. EDiS Company will facilitate the meeting and will make final decisions on clash resolution that are the least impact to the project as a whole. COORDINATION MEETINGS

 WILL NOT BE USED TO RESOLVE INDIVIDUAL

 MODELER'S/ENGINEER'S/ARCHITECTURE'S/CONTRACTOR'S WORK. If a Contractor does not post a clash-free system of its own work or that only contains a very limited number of clashes internally (Example: Fire Sprinkler Clashing with Fire Sprinkler), that Contractor will be considered unprepared for the meeting and will be responsible for any delays to the project schedule and any associated costs due to that delay which shall be determined by EDiS
- 3.11.2. Each team participant will review the clash report prior to the subsequent coordination meeting in order to clean up any clashes that can be made without review by all participants.
- 3.11.3. All project participants are expected to be prepared for the meeting with new drawing work of the next area to be coordinated per the coordination schedule and any drawing changes based on the published clash report. Each participant will have available any shop model, submittals or other materials required to solve identified or potential conflicts.
- 3.11.4. The coordination schedule will be maintained and all identified conflicts addressed and resolved per the construction schedule. The coordination schedule may change as a result of design and/or model changes requested and

- made by the Owner, Architect or Engineer. In addition, the coordination schedule assumes selection of equipment is made within the time frame of the construction schedule as needed so it is incorporated into the coordination efforts without delay.
- 3.11.5. All agreed upon corrections to identified clashes determined by the team at the Coordination Meeting are to be updated and resolved prior to the next meeting.
- 3.12. When an area of the model is fully coordinated and clash-free, each participant agrees:
 - 3.12.1. That each trades work is fully coordinated and will be installed per the signed off area as reflected in the coordination model. Sign off drawings from each trade are turned over in PDF form with projects title block. EDiS Company will include legend and title block for trade PDF file.
 - 3.12.2. All trades to provide Total Coordination drawings at the time of sign off. TCD's are drawings which include all trades sign off models. Models are submitted for turn over to EDiS Company. The purpose for TCD's is to provide coordinated building models for jobsite coordination. Models from Contractors to include all but not limited to: item elevations, product type and all equipment tags.
 - 3.12.3. During the installation of each trade's work, EDiS Company will refer to the signed off report and the 3D model to resolve any conflicts. Each installation firm agrees to install all work per the signed off drawings/model, without deviation. If a deviation, during installation, takes place without prior approval from all detailing parties, it will be the responsibility of the installing contractor to tear out the work and install it as shown on the signed off drawings/coordination model. The cost of this work will be evaluated when the issues arise; however, the party responsible for the conflict will be responsible for the cost of the fix, including the additional detailing time of all parties involved.
 - 3.12.4. The model is not considered to be the final coordination model until the BIM Coordinator, EDiS Company's Project Manager, A/E, and Owner has approved all clash free systems and routings and documents are signed off by all parties (contractors).
- 3.13. Should a conflict arise during installation that was missed during the coordination process, and not a result of deviating from the signed off area, the coordination team will work together to find a solution that is optimal for all trades and the project.
- 3.14. The final coordination model shall be kept up to date by all participants during construction to include as-built information and any other pertinent data that is essential to the project. The data will be submitted electronically in Revit, AutoCAD, NWC, PDF format. Items to be included are:
 - 3.14.1. RFI responses.
 - 3.14.2. Design change orders or designs that are in addition to the original contract documents.
 - 3.14.3. Equipment will be tagged with all (Owner required) identification information within the model (ex. Equipment schedule information and O&M Manuals). This identification information will be the same and correspond to all other

- close-out documentation. This close-out documentation including O&M manuals, maintenance information, etc. will be included in PDF form.
- 3.14.4. EDiS will provide a location for the Contractor to submit the required documentation at a later time. EDiS will generate the completed coordination model based on these documents for turn-over to the owner.
- 3.14.5. Tekla or Navisworks will be utilized to link PDF closeout documents, select RFI's, select Images, etc., to the closeout model. Contractors need to provide closeout documents in the format requested by EDiS for the closeout model as well as adding smart data to other model type files as determined necessary by EDiS within the time frame A/E dictates. For example, if Revit files are needed to produce the closeout model, EDiS may direct Contractor to set up certain Revit views for the exporting of files which make up the as-built models. A/E may also request that the Contractor create viewpoints for their equipment in as-built model.
- 3.15. Data for coordination will be available on the Box.com, to be referenced by the other participants. Models and drawing files will never be tampered with by non-owners of the file. If a mistake occurs and a drawing is inadvertently modified, the responsible party is required to alert the project team. (See attachment)
- 3.16. The Owner's commissioning agent can attend the coordination meeting to review the detailing effort for commissioning related items.
- 3.17. All trades will provide Level of Development (LOD) (350) models for weekly coordination meeting.

4. REQUIREMENTS OF THE LEAD COORDINATOR

- 4.1. The Lead Coordinator will be EDiS Company.
- 4.2. Identification of a common insertion point for all drawing files. (Utilize Revit Models origin)
- 4.3. A/E to provide Lead Coordinator model exports to 2D/3D CAD of each trade component as needed to coordination. Origins to be maintained in exports.
- 4.4. Using the A/E's files, the Lead Coordinator will utilize & maintain the base architectural model.
 - 4.4.1. The base architectural model is a combination of the base structural model and other architectural elements. These architectural elements will include all elevated 3D architectural elements including, but not limited to, all walls that extend to the deck, fire and smoke walls, soffits and associated framing, ceiling planes, and finish floor planes.
 - 4.4.2. This model will consist of cleaned-up floor plans void of any excessive notations, leaders, bubbles, marks, grid lines, etc. that are not required for detailing development and that may potentially cause a conflict in the base composite model.
 - 4.4.3. In the event of changes to the A/E's contract documents, the A/E must revise the base architectural model/MEP/structural models and distributed to all coordination participants. This will require Contractor participation as need by A/E to complete the revised models for directive. Revision work will be directed by Owner through an executed change order.

- 4.4.4. The base architectural models will be distributed and maintained by EDiS Company.
- 4.5. Collation of all trades' detailing models as posted to the project's web-based posting site into a Base Composite Model thru the use of Navisworks 2017.
 - 4.5.1. Establish a standard two inch (2") soft tolerance within the clash detection software. This tolerance will result in a reported clash for any elements drawn closer than two inches (2") to one another.
 - 4.5.2. Assess and include most current clash files including the generation of a clash reports and distribution to all project participants per the coordination schedule.
 - 4.5.3. Collect final as-built files from all trades and generate a Final Coordination Model to submit to CM as part of the close-out requirements.
 - 4.5.4. Coordination meeting minutes shall be kept by EDiS Company Lead Coordinator or EDiS' Project Manager showing issues and resolution dates.

5. REQUIREMENTS OF THE STRUCTURAL STEEL CONTRACTOR

- 5.1. Obtain from the A/E Structural Revit files to be used in the generation of the base structural model.
- 5.2. The structural Contractor will develop and provide the base structural model within the time frame dictated by EDiS and provide structural model updates to ensure the coordination team is coordinating the MEP/FP to the most up-to-date structural model.
- 5.3. All structural framing members in the final sizes and locations (typically referred to as a "mill order" or "procurement" model) will be shown in the model as 3D objects with surfaces. At the discretion of the lead coordinator, this model may be void of all hardware and secondary structural steel but should include the major components: primary steel, metal decking, slab on metal decking, and gusset plates.
- 5.4. The structural insertion/datum point must match the architectural insertion/datum location. No detailing work shall take place until the insertion points of the architectural and structural models match.
- 5.5. The steel Contractor is responsible for resolving their own modeling issues (i.e.: steel not to scale, missing key structural components, missing surface data, and model showing as wire frame data, model exported to proper file format, etc.). The steel Contractor is responsible to provide a steel design model in a usable format for all coordination participants to reference as the base structural model.
- 5.6. A FINAL 3D steel model and 2D shop drawings shall be submitted to the structural engineer of record, and used for field erection. It must be completed and submitted in accordance to the BIM schedule. This model shall consist of:
 - 5.6.1. All primary and secondary steel including metal deck, slab on metal deck, actual gusset plate sizes, connection details, edge of slab details (pour stop), brick relief angles, embeds, anchor bolts, and other miscellaneous metals. Curtain Wall embeds modeled by others.
 - 5.6.2. Submit final approved files to Lead Coordinator for insertion into the coordinated model, and to the design team in the form of shop drawings and/or Navisworks compatible model.

6. DETAILING REQUIREMENTS OF ALL PARTICIPANTS

6.1. File sharing information:

6.1.1. Site Contractor (SIT-1)

- Attend BIM trade coordination meetings
- Deliver three dimensional model to coordination team
- Required to deliver items identified in G201 matrix such as
- Develop appropriate tie-in locations of utilities with trades. Site contractor required to deliver main connections in model format
- Site underground items outside direct tie in locations not required in three dimensional models.
- Sanitary piping tie-in
- Storm water tie-in
- Domestic water tie-in
- 6.1.2. The in-progress (Coordination Software Ex: IFC/NWC/Cad) naming convention will be: project-trade-level. Example:

Project Designation - MechPipe-1

Project Designation -HVAC-1

Project Designation -Fire Protection-1

Project Designation - Elec-1

Project Designation -Plumbing-1

Project Designation -TeleCom-1 or AV-1

Project Designation –Pneumatic Tube-1, etc.

Additional designations may be added based on project specific scope and deliverable requirements and/or deemed as a critical component to the coordination process.

6.1.3. Each model posted by the contractor shall contain sub-layers for the purpose of system identification and isolation during the clash detection process. Example:

HVAC-1 shall contain sub-layers for:

- Supply
- Return
- Exhaust
- Fire Smoke-Dampers
- VAV clearance
- AC Door Access
- Fan Coil Units
- FCU Access
- Equipment
- Equipment Pads
- Equipment Clearances
- Hangers (designated per system)

MechPipe-1 shall contain sub-layers for:

- Hydronic Pipe Supply
- Hydronic Pipe Return
- Chilled Pipe Supply
- Chilled Pipe Return

- Shutoff Access
- Equipment
- Equipment Pads
- Equipment Clearances
- Hangers

Plumbing-1 shall contain sub-layers for:

- Domestic Water Supply
- Domestic Water Return (with additional layer designations for hot and cold)
- Gas
- Med-Gas
- Shutoff Access (designated per system)
- Sanitary
- Vent
- Roof Drain
- Rain Conductors
- Equipment
- Equipment Pads
- Equipment Clearances
- Hangers (designated per system)

Elec-1 shall contain sub-layers for:

- Lights
- Light Clearance
- Conduit (with additional layer designation for power and data)
- Cable Tray
- Cable Tray Access Clearance
- Pull Boxes
- Pull Box Access Clearance
- I-Boxes
- Elec. Panels
- Elec. Panel Access Clearance
- Elec. Troughs
- Elec. Trough Access Clearance
- Equipment
- Equipment Clearances
- Equipment Pads
- Hangers

Fire Protection1 shall contain sub-layers for:

- Mains
- Branches
- Shutoff Access
- Hangers

Pneumatic Tube-1 shall contain sub-layers for:

- Equipment
- Equipment Access

Hangers

Additional sub layers may be added based on project specific scope and deliverable requirements and/or deemed as a critical component to the coordination process.

6.1.4. Clash detection files will be posted to **BuildingBlok.com** before **12:00 PM**, on **Wednesday and Friday** by each of the trades. The lead coordinator will also post updated coordination models as needed. The lead coordinator will maintain the master coordination files. The weekly coordination model will be name abbreviated Project Name-Floor-Coordination Model-Month-Day-Year.

All coordination participants will maintain a current control copy of their own drawing files outside of the project's web-based posting site. Control drawings are to include all previously posted files.

- 6.2. Trade Colors in the Coordination environment:
 - Duct Supply Dark Green
 - Duct Return- Light Blue
 - Duct Exhaust –Light Green
 - Mech Pipe- Orange
 - Pressure lines/Gas Tan
 - Sanitary/Vent Brown
 - Rain Conductors/Roof Drains Maroon
 - Domestic Water- Blue
 - Fire Red
 - Pneumatic Purple
 - Electrical Yellow
 - All Base Architectural Elements (walls, soffits, ceiling & floor planes, etc.) will
 assume Arch model color scheme saved in the export or Lead Coordinator will
 modify select color scheme in the coordination model.
 - Steel Dark Grey
 - Any hangers and equipment (that is fed per the designated system) will assume
 the same color of that system it is associated with. Additional color schemes may
 be added based on project specific scope and deliverable requirements and/or
 deemed as a critical component to the coordination process.
- 6.3. When posting drawing files for coordination:
 - 6.3.1. Posted Contractor coordination files of each trades system should be clash-free with in their respective data. To clarify; trades should refrain from posting data that shows their systems clashing with itself.
 - 6.3.2. When coordination of an area is completed there should not be any unresolved clashes remaining.
 - 6.3.3. These files should be void of any text, dimensions or any other notations.
- 6.4. Each coordination participant is required to submit three (3) complete sets of installation drawings as well as electronic PDF's prior to any work being installed in the field. If A/E spec requires more or less than that will govern over this document. These complete drawings are to be fully dimensioned and notated. Items to be noted in the final, fully coordinated drawing paper and electronic files of each system include:
 - 6.4.1. Bottom and top elevations of duct, pipe, conduit racks, cable trays etc. must be indicated (where applicable).

- 6.4.2. Dimensions shall be shown from the gridlines to the centerline of each element drawn (round duct, pipe, cable tray, etc.) and from finished floor.
- 6.4.3. Height to top of light housing assembly must be indicated.
- 6.4.4. Labeling of all equipment.
- 6.5. During the coordination drawing effort, priority will be given to those systems that have the least flexibility. The following list is a descending order of the system priority and shall be used as a general guideline. Throughout the coordination drawing effort, adjustments and deviations to this list can be made with the approval of EDiS Company. (0'- 6") clear above the ceiling shall be maintained for access and construction of the ceiling, whenever possible. Required maintenance and/or code access spaces and set-backs take precedence over all systems.
 - 6.5.1. Gravity Pipe
 - 6.5.2. Plumbing Vent
 - 6.5.3. Ductwork and appurtenances
 - 6.5.4. Cable tray
 - 6.5.5. Recessed light fixtures
 - 6.5.6. Fire protection piping and fixtures
 - 6.5.7. Electrical conduit over (3/4") in diameter
 - 6.5.8. Pneumatic tube and other record or material conveying systems
 - 6.5.9. HVAC piping
 - 6.5.10. Plumbing, supply and medical gas piping
 - 6.5.11. Electrical conduit smaller than 3/4" in diameter
 - 6.5.12. Above ceiling miscellaneous metal supports
 - 6.5.13. Provide all copper tube routes (racks) for mechanical systems, including valves, clearance zones and hangers.
- 6.6. Items to be included in the detailed drawing progress include:
 - 6.6.1. All systems must be fully detailed and shown as individual elements including ductwork, all piping 3/4" and larger, pneumatic tubing, exterior wall connections, any piping that is smaller than ½" that is racked or banked, etc.
 - 6.6.2. Ductwork is to include size, layout and routing of all metal and flex ductwork, reheat coils, terminal units, filters registers, grilles, diffusers, and similar features; provide notation for diffuser boot sizes and heights and any other special features
 - 6.6.3. All valves, dampers and VAV's or heat pumps will note any items requiring access for service and maintenance as well as access doors in inaccessible ceilings.
 - 6.6.4. All piping valves, boxes, supports, etc. are to be fully detailed
 - 6.6.5. Sprinkler head locations shall be shown on ceiling plans.
 - 6.6.6. All electrical conduits two inches (2") or more in diameter are to be modeled and shown in addition to smaller diameter conduit that is racked or banked.
 - 6.6.7. Electrical items such as hangers, supports, electrical fixtures, lights, speakers, detectors, sensors, cable trays, raceways, sleeves, pull boxes, and access space claims, etc. must be shown.
 - 6.6.8. If an element is not shown, under the lead coordinators approval, it will be assumed to be field routed and to not interfere with the other elements that are shown or within code clearances. Contractors who field route their elements are

- responsible to ensure their installation will be feasible and void of creating a clash in the field. Coordinated items take precedence over field routing.
- 6.6.9. All major hangers and supports (including sway bracing, equipment bracing, hangers, etc.), penetrations, openings must be shown for all systems. Sharing of supports with other systems is discouraged, but can be accomplished with prior owner and/or field inspector approval.
- 6.6.10. All insulation must be shown with appropriate thicknesses. All insulation & clearance zones will be modeled or accounted for during the clash detection process.
- 6.6.11. Fire spray: If required by your building type, establish a safe thickness from all structural objects with which to run your clashes. Assume fire spray will be two inches (2") thick.
- 6.6.12. Engineered stud framing must be modeled for king studs and doors.
- 6.6.13. Code clearances and maintenance access clearances must be shown and maintained; these include, but are not limited to access to VAVs, air handling units, egresses around pumps and tanks, smoke FDs, electrical panels, pneumatic tube transfer units, cable tray access, pull boxes, valve access, etc.
- 6.6.14. All trades must coordinate and detail their systems with the intent of installing each system at the optimal elevation above ceiling, taking into consideration, access to equipment for maintenance, repairs, connections, filters and removal while eliminating or minimizing the impact to surrounding components.
- 6.7. Established Clash Files are to be incorporated to ensure proper coordination. List of those files to be provided by the Lead Coordinator.
- 6.8. Refer to Appendix B Soft Clash Requirements for additional soft-clash requirements.

7. SCHEDULE OF DRAWING COMPLETION AND SIGN-OFF

7.1. The participants should plan on the coordination process taking three (3) months. The coordination schedule is as follows:

This table will be populated at the BIM Coordination Kick-off Meeting. OR Schedule to be developed as part of the master construction schedule development (see Section 00230).

Zone	Floor	Coordination Meeting	Sign-Off Date

- 7.2. At the completion of each floor, the team will determine the specific "priority walls" that will be constructed full-height ahead of other interior partitions and MEP installations.
- 7.3. 3D MEP/FP Coordination Team

7.3.1. The goal of the coordination team will be to integrate the architectural, structural, mechanical, electrical, fire protection, and project specific elements into a collaborative 3D model to identify and resolve issues pertaining to MEP/FP systems and to ensure succinct and expedited field installations of these systems following the release of each zone/floor after clash free conditions are met. (Filled out at BIM Coordination Kick-off Meeting)

7.3.2.

BIM Coordinator	EDiS Company	
Main Contact	Chris Donahue	
Phone Number	302-421-2963	
Email Address	cdonahue@ediscompany.com	
Project Manager	EDiS Company	
Main Contact	Andy Hickey	
Phone Number	302-421-2972	
Email Address	ahickey@ediscompany.com	
Project Engineer	EDiS Company	
Main Contact	TBD	
Phone Number		
Email Address		
Project Superintendent	EDiS Company	
Main Contact	TBD	
Phone Number		
Email Address		
Site Contractor	TBD	
Main Contact		
Phone Number		
Email Address		
HVAC	TBD	
Main Contact		
Phone Number		
Email Address		
Electrical	TBD	
Main Contact		
Phone Number		
Email Address		

Concrete	TBD	
Main Contact		
Phone Number		
Email Address		
Plumbing and Piping	TBD	
Main Contact		
Phone Number		
Email Address		
Architectural	TBD	
Main Contact		
Phone Number		
Email Address		
MEP/FP Engineers	TBD	
Main Contact		
Phone Number		
Email Address		
Structural Steel	TBD	
Main Contact		
Phone Number		
Email Address		
Miscellaneous Steel	TBD	
Main Contact		
Phone Number		
Email Address		

EXHIBIT '1'

ARTICLE 1: GENERAL PROVISIONS

- 1.1 This document defines protocols, expected levels of development, and authorized uses of Building Information Models on this Project. It assigns specific responsibility for the development of each Model Element to a defined Level of Development at each Project phase. Where a provision in this Exhibit conflicts with a provision in the Agreement into which this Exhibit is incorporated, the provision in this Exhibit will prevail.
 - 1.1.1 The parties agree to incorporate this Exhibit by reference into any other agreement for services or construction for the Project.

ARTICLE 2: LEVEL OF DEVELOPMENT (LOD)

2.1 The following LOD descriptions identify the specific content requirements and associated authorized uses for each Model Element at five progressively detailed levels of completeness. Each subsequent LOD builds on the previous level and includes all the characteristics of previous levels.

2.2 LOD 350

2.2.1 Model Content Requirements. Overall building massing indicative of area, height, volume, location, and orientation may be modeled in three dimensions or represented by other data.

2.2.2 Authorized Uses

- 2.2.2.1 **Analysis**. The Model may be analyzed based on volume, area and orientation by application of generalized performance criteria assigned to the representative Model Elements.
- 2.2.2.2 **Cost Estimating**. The Model may be used to develop a cost estimate based on current area, volume or similar conceptual estimating techniques (e.g., square feet of floor area, condominium unit, hospital bed, etc.).
- 2.2.2.3 **Schedule**. The Model may be used for project phasing and overall duration.

2.3 LOD 300 and 350

- 2.4.1 Model Content Requirements. Model Elements are modeled as specific assemblies accurate in terms of quantity, size, shape, location, and orientation. Existing building elements are modeled as shown on building record drawings. Non-geometric information such as object description and object tags (door number, equipment number, etc) and quantities should be included with each object. Examples of the details required for systems modeled to LOD 300 include, but are not limited to:
 - Show all, but not limited to, unground utilities, plumbing and mechanical, concrete modeled as contract documents.
 - Site Utilities (see matrix and 6.1 front end)
 - Masonry
 - Steel decking
 - Correct slopes for gravity piping for sanitary, storm or wet fire suppression systems.

- Piping materials specifically called out on documents included with model element attributes (generic manufacturer for system components are acceptable).
- Insulation around Pipe and Ducting.
- Duct dampers included with the duct system.
- Doors/Frames (hollow metal and storefront)
- Owner Furnished Fixtures, Equipment, etc. generically modeled as space claims by the Model Element Author (MEA).
- Concrete
- Anchor bolts
- Structural steel
- Steel stairs, handrails
- Floor/roof penetration steel
- Significantly sized support hangers and sleeves for all systems
- Uni-Strut associated with system components if it is located in a tight overhead space (case by case basis)
- Architectural millwork/casework
- Metal panels and support steel
- Curtainwall system
- Steel stud framing including kickers and trusses at floor penetrations.
- Valve locations (clearance)
- Access panels (these should be modeled with the system they provide access to).
- Conduit racks or other substantially wide / bundled electrical routing. (these can be generically modeled, i.e. extruded boxes, space claims)
- Single conduit runs associated with any system (lighting, power, controls, etc) if needed to coordinate concrete coring.
- Kitchen equipment
- MEP/FP & Low Voltage Equipment
- MEP/FP & Low Voltage Systems
- Pull box locations and any extra space claims for their access.
- Telecom & Data

2.4.2 Authorized Uses

- 2.4.2.1 **Construction**. Suitable for the generation of traditional construction documents. Contractors may utilize this model for coordination purposes and creation of shop drawings.
- 2.4.2.2 **Analysis**. The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.
- 2.4.2.3 **Schedule**. The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.

ARTICLE 3: MODEL ELEMENTS

3.1 Reliance on EDiS Company's Model Element Matrix

- 3.1.1 The EDiS Company Model Element Matrix at the end of this section identifies (1) the LOD required for each Model Element at the end of each Project phase, and (2) the Model Element Author responsible for developing the Model Element to the LOD identified. Each Model Element Author's content is intended to be shared with subsequent Model Element Authors and Model Users throughout the course of the Project.
- 3.1.2 It is understood that while the content of a specific Model Element may include data that exceeds the required LOD identified in the Model Element Table for a particular phase, Model Users and subsequent Model Element Authors may rely on the accuracy and completeness of a Model Element consistent only with the content required for a LOD identified in the Model Element Table.
- 3.1.3 Any use of, or reliance on, a Model Element inconsistent with the LOD indicated in the Model Element Table by subsequent Model Element Authors or Model Users shall be at their sole risk and without liability to the Model Element Author. To the fullest extent permitted by law, subsequent Model Element Authors and Model Users shall indemnify and defend the Model Element Author from and against all claims arising from or related to the subsequent Model Element Author's or Model User's modification to, or unauthorized use of, the Model Element Author's content.

3.2 Table Instructions

- 3.2.1 The Model Element Table at the end of this section indicates the LOD to which each Model Element Author (MEA) is required to develop the content of the Model Element at the conclusion of each phase of the Project. EDiS Company holds the rights of this table and all ownership right for edits are performed via EDiS Company.
- 3.3 EDiS Company's Model Element Matrix AIA Document G202-2013 (attached).
- 3.4 Insertion Point (attached).



Building Information Modeling and Digital Data Exhibit

This Exhibit dated the 1st day of April in the year 2020 is incorporated into the agreement (the "Agreement") between the Parties for the following Project: (Name and location or address of the Project)

Everett Meredith Middle School 504 South Broad Street Middletown, DE 19709

TABLE OF ARTICLES

- **GENERAL PROVISIONS**
- TRANSMISSION AND OWNERSHIP OF DIGITAL DATA
- 3 **DIGITAL DATA PROTOCOLS**
- **BUILDING INFORMATION MODELING PROTOCOLS**
- OTHER TERMS AND CONDITIONS

ARTICLE 1 **GENERAL PROVISIONS**

- § 1.1 This Exhibit provides for the establishment of protocols for the development, use, transmission, and exchange of Digital Data for the Project. If Building Information Modeling will be utilized, this Exhibit also provides for the establishment of the protocols necessary to implement the use of Building Information Modeling on the Project, including protocols that establish the expected Level of Development for Model Elements at various milestones of the Project, and the associated Authorized Uses of the Building Information Models.
- § 1.2 The Parties agree to incorporate this Exhibit into their agreements with any other Project Participants that may develop or make use of Digital Data on the Project. Prior to transmitting or allowing access to Digital Data, a Party may require any Project Participant to provide reasonable evidence that it has incorporated this Exhibit into its agreement for the Project, and agreed to the most recent Project specific versions of AIA Document G201TM–2013, Project Digital Data Protocol Form and AIA Document G202TM–2013, Project Building Information Modeling Protocol Form.
- § 1.2.1 The Parties agree that each of the Project Participants utilizing Digital Data on the Project is an intended third party beneficiary of the Section 1.2 obligation to incorporate this Exhibit into agreements with other Project Participants, and any rights and defenses associated with the enforcement of that obligation. This Exhibit does not create any third-party beneficiary rights other than those expressly identified in this Section 1.2.1.

§ 1.3 Adjustments to the Agreement

§ 1.3.1 If a Party believes that protocols established pursuant to Sections 3.2 or 4.5, and memorialized in AIA Documents G201-2013 and G202-2013, will result in a change in the Party's scope of work or services warranting an adjustment in compensation, contract sum, schedule or contract time, the Party shall notify the other Party. Failure to provide notice as required in this Section 1.3 shall result in a Party's waiver of any claims for

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be incorporated into an agreement between the parties and used in conjunction with AIA Documents G201™-2013, Project Digital Data Protocol Form, and G202™-2013, **Building Information Modeling** Protocol Form. It is anticipated that other Project Participants will incorporate a project specific E203-2013 into their agreements, and that the Parties and other Project Participants will set forth the agreed-upon protocols in AIA Documents G201-2013 and G202-2013.

adjustments in compensation, contract sum, schedule or contract time as a result of the established protocols.

- § 1.3.2 Upon such notice, the Parties shall discuss and negotiate revisions to the protocols or discuss and negotiate any adjustments in compensation, contract sum, schedule or contract time in accordance with the terms of the Agreement.
- § 1.3.3 Notice required under this Section 1.3 shall be provided within thirty days of receipt of the protocols, unless otherwise indicated below:

(If the Parties require a notice period other than thirty days from receipt of the protocols, indicate the notice period below.)

§ 1.4 Definitions

- § 1.4.1 Building Information Model. A Building Information Model is a digital representation of the Project, or a portion of the Project, and is referred to in this Exhibit as the "Model," which term may be used herein to describe a Model Element, a single model or multiple models used in the aggregate, as well as other data sets identified in AIA Document G202–2013, Project Building Information Modeling Protocol Form.
- § 1.4.2 Building Information Modeling. Building Information Modeling or Modeling means the process used to create the Model.
- § 1.4.3 Model Element. A Model Element is a portion of the Model representing a component, system or assembly within a building or building site.
- § 1.4.4 Level of Development. The Level of Development (LOD) describes the minimum dimensional, spatial, quantitative, qualitative, and other data included in a Model Element to support the Authorized Uses associated with such LOD.
- § 1.4.5 Authorized Uses. The term "Authorized Uses" refers to the permitted uses of Digital Data authorized in the Digital Data and/or Building Information Modeling protocols established pursuant to the terms of this Exhibit.
- § 1.4.6 Model Element Author. The Model Element Author is the entity (or individual) responsible for managing and coordinating the development of a specific Model Element to the LOD required for an identified Project milestone, regardless of who is responsible for providing the content in the Model Element. Model Element Authors are to be identified in Section 3.3, Model Element Table, of AIA Document G202–2013.
- § 1.4.7 Digital Data. Digital Data is information, including communications, drawings, specifications and designs, created or stored for the Project in digital form. Unless otherwise stated, the term Digital Data includes the Model.
- § 1.4.8 Confidential Digital Data. Confidential Digital Data is Digital Data containing confidential or business proprietary information that the transmitting party designates and clearly marks as "confidential."
- § 1.4.9 Written or In Writing. In addition to any definition in the Agreement to which this Exhibit is attached, for purposes of this Exhibit and the Agreement, "written" or "in writing" shall mean any communication prepared and sent using a transmission method set forth in this Exhibit, or the protocols developed pursuant to this Exhibit, that permits the recipient to print the communication.
- § 1.4.10 Written Notice. In addition to any terms in the Agreement to which this Exhibit is attached, for purposes of this Exhibit and the Agreement, "written notice" shall be deemed to have been duly served if transmitted electronically to an address provided in this Exhibit or the Agreement using a transmission method set forth in this Exhibit that permits the recipient to print the communication.
- § 1.4.11 Party and Parties. The terms "Party" and "Parties" refer to the signing parties to the Agreement.
- § 1.4.12 Project Participant. A Project Participant is an entity (or individual) providing services, work, equipment or materials on the Project and includes the Parties.

ARTICLE 2 TRANSMISSION AND OWNERSHIP OF DIGITAL DATA

- § 2.1 The transmission of Digital Data constitutes a warranty by the Party transmitting Digital Data to the Party receiving Digital Data that the transmitting Party is the copyright owner of the Digital Data, or otherwise has permission to transmit the Digital Data for its use on the Project in accordance with the Authorized Uses of Digital Data established pursuant to the terms of this Exhibit.
- § 2.2 If a Party transmits Confidential Digital Data, the transmission of such Confidential Digital Data constitutes a warranty to the Party receiving such Confidential Digital Data that the transmitting Party is authorized to transmit the Confidential Digital Data. If a Party receives Confidential Digital Data, the receiving Party shall keep the Confidential Digital Data strictly confidential and shall not disclose it to any other person or entity except as set forth in Section 2.2.1.
- § 2.2.1 The receiving Party may disclose Confidential Digital Data as required by law or court order, including a subpoena or other form of compulsory legal process issued by a court or governmental entity. The receiving Party may also disclose the Confidential Digital Data to its employees, consultants or contractors in order to perform services or work solely and exclusively for the Project, provided those employees, consultants and contractors are subject to the restrictions on the disclosure and use of Confidential Digital Data as set forth in this Exhibit.
- § 2.3 By transmitting Digital Data, the transmitting Party does not convey any ownership right in the Digital Data or in the software used to generate the Digital Data. Unless otherwise granted in a separate license, the receiving Party's right to use, modify, or further transmit Digital Data is specifically limited to designing, constructing, using, maintaining, altering and adding to the Project consistent with the terms of this Exhibit, and nothing contained in this Exhibit conveys any other right to use the Digital Data.
- § 2.4 Where a provision in this Article 2 conflicts with a provision in the Agreement into which this Exhibit is incorporated, the provision in this Article 2 shall prevail.

ARTICLE 3 DIGITAL DATA PROTOCOLS

§ 3.1 Anticipated Types of Digital Data. The anticipated types of Digital Data to be used on the Project are as follows: (Indicate below the information on the Project that shall be created and shared in a digital format. If the Parties indicate that Building Information Modeling will be utilized on the Project, the Parties shall also complete Article 4.)

	*	Location of Detailed Description
	Applicability to the Project	(Section 3.1.1 below or in an
	(Indicate Applicable or	attachment to this exhibit
Anticipated Digital Data	Not Applicable)	and identified below)
Project Agreements and Modifications	Applicable	
Project communications	Via Email &	
	BuildingBlok/Revizto	
Architect's pre-construction submittals	Not Applicable	Via Email & BuildingBlok
Contract Documents	Applicable	
Contractor's submittals	Applicable	
Subcontractor's submittals	Applicable	
Modifications	Applicable	
Project payment documents	Applicable	
Notices and claims	Applicable	
Building Information Modeling	Applicable	
/D 1-1-4 - 1\		

(Row deleted)

§ 3.1.1 Insert a detailed description of the anticipated Digital Data identified in Section 3.1, if not further described in an attachment to this Exhibit.

See attached Exhibit

§ 3.2 As soon as practical following execution of the Agreement, the Parties shall further describe the uses of Digital Data, and establish necessary protocols governing the transmission and Authorized Uses of Digital Data, in consultation with the other Project Participants that are expected to utilize Digital Data on the Project.

§ 3.2.1 Unless another Project Participant is identified below, the Architect shall prepare and distribute to the other Project Participants Digital Data protocols for review, revision and approval. (If a Project Participant other than the Architect shall be responsible for preparing draft and final Digital Data protocols, identify that Project Participant.)

EDiS Company

- § 3.2.2 The agreed upon Digital Data protocols shall be set forth in AIA Document G201–2013 and each Project Participant shall memorialize their agreement in writing to such Digital Data protocols.
- § 3.2.3 The Parties, together with the other Project Participants, shall review and, if necessary, revise the Digital Data protocols at appropriate intervals as required by the conditions of the Project.
- § 3.3 The Parties shall transmit, use, store and archive Digital Data in accordance with the Digital Data protocols set forth in the latest version of AIA Document G201–2013 agreed to by the Project Participants.

§ 3.4 Unauthorized Use

§ 3.4.1 Prior to Establishment of Digital Data Protocols

If a Party receives Digital Data prior to the agreement to, and documentation of, the Digital Data protocols in AIA Document G201-2013, that Party is not authorized to use or rely on the Digital Data. Any use of, or reliance on, such Digital Data is at that Party's sole risk and without liability to the other Party and its contractors, consultants, agents and employees.

§ 3.4.2 Following Establishment of Digital Data Protocols

Following agreement to, and documentation of, the Digital Data protocols in AIA Document G201-2013, if a Party uses Digital Data inconsistent with the Authorized Uses identified in the Digital Data protocols, that use shall be at the sole risk of the Party using the Digital Data.

§ 3.5 Digital Data Management

§ 3.5.1 Centralized electronic document management system use on the Project shall be: (Check the appropriate box. If the Parties do not check one of the boxes below, the default selection shall be that the Parties will not utilize a centralized electronic document management system on the Project.)

- [X] The Parties intend to use a centralized electronic document management system on the Project.
- [] The Parties do not intend to use a centralized electronic document management system on the Project.
- § 3.5.2 If the Project Participants intend to utilize a centralized electronic document management system on the Project, the Project Participants identified in Section 3.5.3 shall be responsible for managing and maintaining such system. The Project Participants responsible for managing and maintaining the centralized electronic document management system shall facilitate the establishment of protocols for transmission, use, storage and archiving of the centralized Digital Data and assist the Project Participants identified in Section 3.2.1 above in preparing Digital Data protocols. Upon agreement to, and documentation of, the Digital Data protocols in AIA Document G201–2013, the Project Participants identified in Section 3.5.3 shall manage and maintain the centralized electronic document management system consistent with the management protocols set forth in the latest version of G201-2013 approved by the Project Participants.
- § 3.5.3 Unless responsibility is assigned to another Project Participant, the Architect shall be responsible for managing and maintaining the centralized electronic document management system. If the responsibility for management and maintenance will be assigned to another Project Participant at an identified Project milestone, indicate below the Project Participant who shall assume that responsibility, and the Project milestone. (Identify the Project Participant responsible for management and maintenance only if the Parties intend to utilize a

Responsible Project Participant

centralized electronic document management system on the Project.)

Project Milestone

EDiS Company

ARTICLE 4 BUILDING INFORMATION MODELING PROTOCOLS

§ 4.1 If the Parties indicate in Section 3.1 that Building Information Modeling will be used on the Project, specify below the extent to which the Parties intend to utilize Building Information Modeling and identify the provisions of this Article 4 governing such use:

[]	The Parties shall utilize Building Information Modeling on the Project for the sole purpose of fulfilling
		the obligations set forth in the Agreement without an expectation that the Model will be relied upon by
		the other Project Participants. Unless otherwise agreed in writing, any use of, transmission of, or
		reliance on the Model is at the receiving Party's sole risk. The remaining sections of this Article 4 shall
		have no force or effect.

The Parties shall develop, share, use and rely upon the Model in accordance with Sections 4.2 through 4.10 of this Exhibit.

§ 4.2 Anticipated Building Information Modeling Scope. Indicate below the portions of the Project for which Modeling will be used and the anticipated Project Participant responsible for that Modeling.

Project Portion for Modeling

See AIA G202 Building Information Modeling Protocol Form Matrix

Responsible Project Participant Christopher D. Donahue

§ 4.3 Anticipated Model Authorized Uses. Indicate below the anticipated Authorized Uses of the Model for the Project, which Authorized Uses will be agreed upon by the Project Participants and further described for each LOD in AIA Document G202–2013.

§ 4.4 Ancillary Modeling Activities. Indicate additional Modeling activities agreed upon by the Parties, but not to be included in AIA Document G202–2013, if any.

(Describe any Modeling activities, such as renderings, animations, performance simulations, or other similar use, including the anticipated amount and scope of any such Modeling activities.)

All parties identified in contract scopes and AIA E203 4.2 are required to provide 3D modeled electronic document in Autocad, Navisworks and /or Revit to participate in Building Information Modeling construction coordination process.

- **§ 4.5 Modeling Protocols.** As soon as practical following execution of the Agreement, the Parties shall, in consultation with the other Project Participants that are expected to utilize Building Information Modeling on the Project, further describe the Authorized Uses of the Model and establish necessary protocols governing the development of the Model utilizing AIA Document G202–2013.
- § 4.5.1 The Modeling protocols shall address the following:
 - .1 Identification of the Model Element Authors;
 - .2 Definition of the various LOD for the Model Elements and the associated Authorized Uses for each defined LOD;
 - .3 Identification of the required LOD of each Model Element at each identified Project milestone;
 - .4 Identification of the construction classification systems to be used on the Project;
 - .5 The process by which Project Participants will exchange and share the Model at intervals not reflected in Section 3.3, Model Element Table, of AIA Document G202–2013;
 - .6 The process by which the Project Participants will identify, coordinate and resolve changes to the Model;
 - .7 Details regarding any anticipated as-designed or as-constructed Authorized Uses for the Model, if required on the Project;
 - .8 Anticipated Authorized Uses for facilities management or otherwise, following completion of the Project; and
 - **.9** Other topics to be addressed by the Modeling protocols: (*Identify additional topics to be addressed by the Modeling Protocols.*)

- § 4.5.2 Unless responsibility is assigned to another Project Participant identified below, the Architect shall prepare and distribute Modeling protocols to the other Project Participants for review, revision and approval. (If a Project Participant other than the Architect shall be responsible for preparing draft and final Modeling protocols, identify that Project Participant.)
- § 4.5.3 The agreed upon Modeling protocols shall be set forth in AIA Document G202–2013 and each Project Participant shall memorialize their agreement in writing to such Modeling protocols.
- § 4.5.4 The Parties, together with the other Project Participants, shall review, and if necessary, revise the Modeling protocols at appropriate intervals as required by the conditions of the Project.
- § 4.6 The Parties shall develop, use and rely on the Model in accordance with the Modeling protocols set forth in the latest version of AIA Document G202–2013, which document shall be included in or attached to the Model in a manner clearly accessible to the Project Participants.

§ 4.7 Unauthorized Use

§ 4.7.1 Prior to Establishment of Modeling Protocols

If a Party receives any Model prior to the agreement to, and documentation of, the Modeling protocols in AIA Document G202-2013, that Party is not authorized to use, transmit, or rely on the Model. Any use, transmission or reliance is at that Party's sole risk and without liability to the other Party and its contractors, consultants, agents and employees.

§ 4.7.2 Following Establishment of Modeling Protocols

Following agreement to, and documentation of, the Modeling protocols in AIA Document G202-2013, if a Party uses or relies on the Model inconsistent with the Authorized Uses identified in the Modeling protocols, such use or reliance shall be at the sole risk of the Party using or relying on the Model. A Party may rely on the Model Element only to the extent consistent with the minimum data required for the identified LOD, even if the content of a specific Model Element includes data that exceeds the minimum data required for the identified LOD.

§ 4.8 Model Management

§ 4.8.1 The requirements for managing the Model include the duties set forth in this Section 4.8. Unless assigned to another Project Participant, the Architect shall manage the Model from the inception of the Project. If the responsibility for Model management will be assigned to another Project Participant, or change at an identified Project milestone, indicate below the identity of the Project Participant who will assume that responsibility, and the Project milestone.

Responsible Project Participant

Project Milestone

Christopher D. Donahue, Project Coordinator

- § 4.8.2 Model Management Protocol Establishment. The Project Participant responsible for managing the Model, in consultation with the other Project Participants that are expected to utilize Building Information Modeling on the Project, shall facilitate the establishment and revision of Model management protocols, including the following:
 - .1 Model origin point, coordinate system, precision, file formats and units
 - .2 Model file storage location(s)
 - Processes for transferring and accessing Model files .3
 - .4 Naming conventions
 - .5 Processes for aggregating Model files from varying software platforms
 - .6 Model access rights
 - .7 Identification of design coordination and clash detection procedures.
 - .8 Model security requirements
 - Other: (Identify additional Model management protocols to be addressed.)

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- § 4.8.3 Ongoing Responsibilities. The Project Participant responsible for managing the Model shall do so consistent with the Model management protocols, which shall also include the following ongoing responsibilities:
 - Collect incoming Models:
 - Coordinate submission and exchange of Models
 - .2 Create and maintain a log of Models received
 - .3 Review Model files for consistency with Sections 4.8.2.1 through 4.8.2.5
 - Maintain a record copy of each Model file received
 - .2 Aggregate Model files and make them available for Authorized Uses
 - .3 Maintain Model Archives and backups consistent with the requirements of Section 4.8.4 below
 - .4 Manage Model access rights
 - Other: (Identify additional responsibilities.)
 - .6 Attend and participate in BIM coordination meetings is mandatory, liquidated damages apply for avoiding BIM process.
- § 4.8.4 Model Archives. The individual or entity responsible for Model management as set forth in this Section 4.8 shall compile a Model Archive at the end of each Project milestone and shall preserve it without alteration as a record of Model completion as of that Project milestone.
- § 4.8.4.1 Additional Model Archive requirements, if any, are as follows:
- § 4.8.4.2 The procedures for storing and preserving the Model(s) upon final completion of the Project are as follows:
- § 4.9 Post-Construction Model. The services associated with providing a Model for post-construction use shall only be required if specifically designated in the table below as a Party's responsibility.

(Designate below any anticipated post-construction Model and related requirements, the Project Participant responsible for creating or adapting the Model to achieve such uses, and the location of a detailed description of the anticipated scope of services to create or adapt the Model as necessary to achieve such uses.)

Post-Construction Model		Applicability to Project (Applicable or	Responsible	Location of Detailed Description of Requirements and Services (Section 4.10 below or in an attachment to this exhibit and	
		Not Applicable)	Project Participant	identified below)	
§ 4.9.1	Remodeling	Not Applicable	1 Tojooc T artioipant	inemified below)	
§ 4.9.2	Wayfinding and Mapping	Not Applicable			
§ 4.9.3	Asset/FF & E Management	Not Applicable			
§ 4.9.4	Energy Management	Not Applicable			
§ 4.9.5	Space Management	Not Applicable			
§ 4.9.6	Maintenance Management	Not Applicable			

(Row deleted)

§ 4.10 Insert a detailed description of the requirements for each Post-Construction Model identified in Section 4.9 and the anticipated services necessary to create each Post-Construction Model, if not further described in an attachment to this Exhibit.

ARTICLE 5 OTHER TERMS AND CONDITIONS

Other terms and conditions related to the transmission and use of Digital Data are as follows:

7

Project Digital Data Protocol Form

PROJECT: (Name and address) Everett Meredith Middle School 504 South Broad Street Middletown, DE 19709

PROTOCOL VERSION NUMBER:

DATE: April 1, 2020

PREPARED BY: Christopher Donahue/Jackie McKee

DISTRIBUTION TO: (List each individual to whom this protocol is distributed. Include individuals listed in Section 1.2, or reference Section 1.2, along with any additional recipients.)

TABLE OF ARTICLES

- GENERAL PROVISIONS REGARDING USE OF DIGITAL DATA
- **DIGITAL DATA MANAGEMENT PROTOCOLS**
- TRANSMISSION AND USE OF DIGITAL DATA

ARTICLE 1 GENERAL PROVISIONS REGARDING USE OF DIGITAL DATA § 1.1 List each Project Participant that has incorporated AIA Document E203™–2013. Building Information Modeling and Digital Data Exhibit, dated , into its agreement for the Project:

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with a project specific AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, which the Parties will incorporate into their Agreement for the Project.

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Project Participant		Discipline
	3	

§ 1.2 Project Participants. For each Project Participant listed in Section 1.1, identify and provide contact information for the individuals responsible for implementation of the Digital Data protocols.

Project Participant	Individual Responsible	Contact Information

§ 1.3 Terms in this document shall have the same meaning as those in AIA Document E203–2013.

DIGITAL DATA MANAGEMENT PROTOCOLS ARTICLE 2

§ 2.1.1 Electronic Document Management System. If, pursuant to Section 3.5.1 of the Project specific version of AIA Document E203-2013, the Project Participants indicated an intent to use a centralized electronic document management system on the Project, the requirements for the centralized electronic document management system are as follows:

(The requirements for the system shall address, among other things, access to and security of Digital Data.)

§ 2.1.2 System Startup Requirements. Initial training and other startup requirements to be implemented with respect to the use or management of Digital Data, if any, are as follows: (Describe in detail any initial training or other startup requirements.)

§ 2.1.3 Ongoing System Requirements. Ongoing training or support programs to be implemented with respect to the use or management of Digital Data, if any, are as follows: (Describe in detail any ongoing training or support programs to be implemented.)

§ 2.2 Digital Data Storage Requirements. The procedures and requirements for storing Digital Data during the course of the Project, if any, are as follows:

(Describe in detail the procedures and requirements for storing Digital Data during the course of the Project.)

- § 2.3 Digital Data Archiving Requirements. The procedures and requirements for archiving and preserving Digital Data during the course of the Project and following final completion of the Project, if any, are as follows: (Describe in detail the procedures and requirements for archiving and preserving Digital Data during the course of the Project and following final completion.)
- § 2.4 Other Digital Data Management protocol requirements, if any, are as follows: (Describe in detail any other requirements.)

Revizto is implemented on this Everett Meredith Middle School project. Revizto is a management software for BIM coordination. All BIM mandatory subcontractors are required to use and complete the coordination through Revizto. License is contractor's responsibility at \$500.00.

ARTICLE 3 TRANSMISSION AND USE OF DIGITAL DATA

§ 3.1 Digital Data Protocol Table. The Project Participants shall comply with the data formats, transmission methods and Authorized Uses set forth in the Digital Data Protocol Table below when transmitting or using Digital Data on the Project.

(Complete the Digital Data Protocol Table by entering information in the spaces below. Adapt the table to the needs of the Project by adding, deleting or modifying the listed Digital Data as necessary. Use Section 3.2 Digital Data Protocol Table Definitions and Notes to define abbreviations placed, and to record notes indicated, in the Digital Data Protocol Table.)

Digital Data	Digital Data Format	Transmission Method	Authorized Uses	Note Number (See Sec. 3.2)
§ 3.1.1 Project Agreements and Modifications	PDF	Email		
§ 3.1.2 Project communications	GOTO Meeting	Email & BB		
General communications		Email & BB		
Meeting notices	PDF	Email & BB		
Agendas	PDF	Email & BB		
Minutes	PDF	Email & BB		
Requests for information	BuildingBlok	Email & BB		
Architect's Supplemental Instructions	AIA G201 & Contract	Email & BB		
§ 3.1.3 Architect's pre-construction submittals	PDF & BB	Email & BB		
Schematic Design Documents		Email & BB		
Design Development Documents		Email & BB		
Construction Documents	PDF	Email & BB		
§ 3.1.4 Contract Documents	PDF	Email & BB		
Architect's Drawings	PDF	Email & BB		
Architect's Specifications	PDF	Email & BB		
§ 3.1.5 Contractor's submittals	PDF	Email & BB		
Product data	PDF	Email & BB		
Submitted by Contractor	PDF	Email & BB		
Returned by Architect	PDF	Email & BB		
Shop drawings	PDF	Email & BB		
Submitted by Contractor	PDF	Email & BB		
Returned by Architect	PDF	Email & BB		
§ 3.1.6 Subcontractor's submittals	Physical & PDF BB	Email & BB		
Product data	PDF & BB	Email & BB		
Submitted by Subcontractor	PDF & BB	Email & BB		
Returned by Contractor	BuildingBlok	Email & BB		
Shop drawings	PDF	Email & BB		
Submitted by Subcontractor	PDF	Email & BB		
Returned by Contractor	PDF	Email & BB		
§ 3.1.7 Modifications				
(Rows deleted)				
Tan Anna da				
Architect's order for a minor change in the Work	PDF	Email & BB		
S 11"		Email & BB		
Construction Change Directives	PDF	Email & BB		
Change Orders	PDF	Email & BB		
§ 3.1.8 Project payment documents				
§ 3.1.9 Notices and Claims				
§ 3.1.10 Closeout documents	Electronic Navisworks			
Record documents	PDF			
Operations and Maintenance Manual				

§ 3.2 Digital Data Protocol Table Definitions and Notes

Digital Data Format:

(Provide required data format, including software version, if applicable.)

Digital Data Format

Definition

Revit/Navisworks/Revizto

Transmission Method:

(Below are suggested abbreviations and definitions. Delete, modify or supplement, as necessary.)

Abbreviation	Definition
CD	Delivered via Compact Disk
EM	Via e-mail
DMS	Centralized Electronic Document Management System

Authorized Uses of Digital Data:

(Below are suggested abbreviations and definitions. Delete, modify or supplement, as necessary.)

Abbreviation	Definition
I	Integrate (incorporate additional digital data without modifying data received)
M	Modify as required to fulfill obligations for the Project
R	Reproduce and distribute
S	Store and view only

Notes:

(List by number shown on table.)



Project Building Information Modeling Protocol Form

PROJECT: (Name and address) Everett Meredith Middle School 504 South Broad Street Middletown, DE 19709

PROTOCOL VERSION NUMBER:

DATE: April 1,2020

PREPARED BY: Chris Donahue/Jackie McKee

DISTRIBUTION TO: (List each individual to whom this protocol is distributed. Include individuals listed in Section 1.1, or reference Section 1.1, along with any additional recipients.)

TABLE OF ARTICLES

- **GENERAL PROVISIONS**
- LEVEL OF DEVELOPMENT
- MODEL ELEMENTS

ARTICLE 1 **GENERAL PROVISIONS**

§ 1.1 For each Project Participant that has incorporated the Project specific AIA Document E203TM—2013, Building Information Modeling and Digital Data Protocol Exhibit, dated April 1, 2020, into its agreement for the Project, identify and provide the contact information for individuals responsible for implementation of the Modeling protocols. If, for any Project Participant, more than one individual will be responsible for implementation of the Modeling protocols, list each individual separately and describe the unique Modeling Role assigned to each individual.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with a Project specific AIA Document E203™-2013. Building Information Modeling and Digital Data Exhibit, which the Parties will incorporate into their agreement for the Project, and a Project specific AIA Document G201™-2013, Project Digital Data Protocol Form.

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Modeling Role	Project Participant	Individual Responsible	Contact Information
Project Coordinator	EDiS BIM Services	Christopher Donahue	EDiS Company 110 S Poplar Street
			Wilmington, De 19801
			302-421-2963 cdonahue@ediscompany.co
			m

§ 1.2 This document establishes the Modeling protocols for the Project. For purposes of these protocols, the Model is comprised of the following information and other data sets:

(Indicate disciplines, separate models, and other data that will be included within the Model and governed by the Modeling protocols.)

- § 1.3 Collaboration Protocols. The Project Participants' protocols for the collaborative utilization of the Model, if any, including communications protocols, a collaboration meeting schedule and colocation requirements, are as follows:
- § 1.4 Technical Requirements. The technical requirements relating to the utilization of Building Information Modeling, including specific software and hardware requirements are as follows:
- § 1.5 Training and Support.-NOT USED
- § 1.6 Model Standard. The Model shall be developed in accordance with the following Model Standard, if any:

§ 1.7 Model Management Protocols and Processes

The following Model Management Protocols and Processes shall apply to the Project only if specifically designated in the table below as being applicable.

(Designate the Model Management Protocols and Processes applicable to the Project in the second column of the table below. In the third column, indicate whether the detailed description of the Model Management Protocol or Process is located in Section 1.8 or in an attached exhibit. If in an exhibit, identify the exhibit.)

		Applicability to Project	Location of Detailed Description (Section 1.8 below or in an
		(Applicable or	attachment to this exhibit
Model Ma	nagement Protocols and Processes	Not Applicable)	identified below)
§ 1.7.1	Model origin point, coordinate system, precision, file formats and units	Applicable	0, 0, 0
§ 1.7.2	Model file storage location(s)	Applicable	EDiS BIM Services
§ 1.7.3	Processes for transferring and accessing Model files	Applicable	Drop Box & BuildingBlok
§ 1.7.4	Naming conventions	Applicable	EDiS Standard
§ 1.7.5	Processes for aggregating Model files from varying software platforms		Autodesk CAD MEP & Navisworks& Revizto
§ 1.7.6	Model access rights	N/A	
§ 1.7.7	Design coordination and clash detection procedures.	Applicable	EDiS
§ 1.7.8	Model security requirements	Applicable	Confidential

§ 1.8 Insert a description of each Model Management Protocol and Process identified in Section 1.7, if not further described in an exhibit attached to this document:

See attached documents

§ 1.9 Terms in this document shall have the same meaning as those in AIA Document E203–2013.

ARTICLE 2 LEVEL OF DEVELOPMENT

§ 2.1 The Level of Development (LOD) descriptions, included in Section 2.2 through Section 2.6 below, identify the specific minimum content requirements and associated Authorized Uses for each Model Element at five progressively detailed levels of completeness. The Parties shall utilize the five LOD descriptions in completing the Model Element Table at Section 3.3.

§ 2.2 LOD 100

§ 2.2.1 Model Element Content Requirements. The Model Element may be graphically represented in the Model with a symbol or other generic representation, but does not satisfy the requirements for LOD 200. Information related to the Model Element (i.e., cost per square foot, tonnage of HVAC, etc.) can be derived from other Model Elements.

§ 2.2.2 Authorized Uses

- § 2.2.2.1 Analysis. The Model Element may be analyzed based on volume, area and orientation by application of generalized performance criteria assigned to other Model Elements.
- § 2.2.2.2 Cost Estimating. The Model Element may be used to develop a cost estimate based on current area, volume or similar conceptual estimating techniques (e.g., square feet of floor area, condominium unit, hospital bed, etc.).
- § 2.2.2.3 Schedule. The Model Element may be used for Project phasing and determination of overall Project duration.
- § 2.2.2.4 Other Authorized Uses. Additional Authorized Uses of the Model Element developed to LOD 100, if any, are as follows:

§ 2.3 LOD 200

§ 2.3.1 Model Element Content Requirements. The Model Element is graphically represented within the Model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.

§ 2.3.2 Authorized Uses

- § 2.3.2.1 Analysis. The Model Element may be analyzed for performance of selected systems by application of generalized performance criteria assigned to the representative Model Elements.
- § 2.3.2.2 Cost Estimating. The Model Element may be used to develop cost estimates based on the approximate data provided and quantitative estimating techniques (e.g., volume and quantity of elements or type of system selected).
- § 2.3.2.3 Schedule. The Model Element may be used to show ordered, time-scaled appearance of major elements and systems.
- § 2.3.2.4 Coordination. The Model Element may be used for general coordination with other Model Elements in terms of its size, location and clearance to other Model Elements.
- § 2.3.2.5 Other Authorized Uses. Additional Authorized Uses of the Model Element developed to LOD 200, if any, are as follows:

User Notes:

§ 2.4 LOD 300

§ 2.4.1 Model Element Content Requirements. The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of quantity, size, shape, location, and orientation. Non-graphic information may also be attached to the Model Element.

§ 2.4.2 Authorized Uses

- **§ 2.4.2.1 Analysis.** The Model Element may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Element.
- **§ 2.4.2.2 Cost Estimating.** The Model Element may be used to develop cost estimates suitable for procurement based on the specific data provided.
- § 2.4.2.3 Schedule. The Model Element may be used to show ordered, time-scaled appearance of detailed elements and systems.
- § 2.4.2.4 Coordination. The Model Element may be used for specific coordination with other Model Elements in terms of its size, location and clearance to other Model Elements including general operation issues.
- § 2.4.2.5 Other Authorized Uses. Additional Authorized Uses of the Model Element developed to LOD 300, if any, are as follows:

§ 2.5 LOD 400

§ 2.5.1 Model Element Content Requirements. The Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information. Non-graphic information may also be attached to the Model Element.

§ 2.5.2 Authorized Uses

- § 2.5.2.1 Analysis. The Model Element may be analyzed for performance of systems by application of actual performance criteria assigned to the Model Element.
- § 2.5.2.2 Cost Estimating. Costs are based on the actual cost of the Model Element at buyout.
- § 2.5.2.3 Schedule. The Model may be used to show ordered, time-scaled appearance of detailed specific elements and systems including construction means and methods.
- § 2.5.2.4 Coordination. The Model Element may be used for coordination with other Model Elements in terms of its size, location and clearance to other Model Elements, including fabrication, installation and detailed operation issues.
- § 2.5.2.5 Other Authorized Uses. Additional Authorized Uses of the Model Element developed to LOD 400, if any, are as follows:

§ 2.6 LOD 500

- § 2.6.1 Model Element Content Requirements. The Model Element is a field verified representation in terms of size, shape, location, quantity, and orientation. Non-graphic information may also be attached to the Model Elements.
- § 2.6.2 Authorized Uses. Specific Authorized Uses of the Model Element developed to LOD 500, if any, are as follows:

ARTICLE 3 MODEL ELEMENTS

§ 3.1 Reliance on Model Elements

§ 3.1.1 At any particular Project milestone, a Project Participant may rely on the accuracy and completeness of a Model Element only to the extent consistent with the minimum data required for the Model Element's LOD for that Project

milestone as identified below in the Model Element Table, even if the content of a specific Model Element includes data that exceeds the minimum data required for the identified LOD.

§ 3.1.2 Coordination and Model Refinement

Where conflicts are found in the Model, regardless of the phase of the Project or LOD, the Project Participant that identifies the conflict shall promptly notify the Model Element Authors and the Project Participant identified in AIA Document E203–2013 Section 4.8 as being responsible for Model management. Upon such notification, the Model Element Author(s) shall act promptly to evaluate, mitigate and resolve the conflict in accordance with the processes established in Section 1.7.7, if applicable.

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§ 3.2 Table Instructions § 3.2.1 The Model Element Table in Section 3.3 indicates the LOD to which each Model Element shall be developed at each identified Project milestone and the Model Element Author.

§ 3.2.2 Abbreviations for each Model Element Author to be used in the Model Element Table are as follows: (Provide abbreviations, such as "A—Architect," or "C—Contractor.")

Model Element Author (MEA)	EDiS Company	Bid Package	ABHA Architects	Macintosh Engineering	Landmark Science & Engineering	Furlow Associates	Design Model	Structural Steel & Misc Metals	Theater Rigging & Stage Curtains	Fire Protection	Plumbing	Mechanical	Electrical
Abbreviation	EDiS	BP	ABHA	MAC	LSE	FA	DM	A-05	A-22	A-26	A-27	A-28	A-30

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Construction Management Bid Package C	LOD MEA Notes								
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§ 3.3 Model Element Table Identify (1) the LOD required for each Model Element at each Project milestone, (2) the Model Element Author, and (3) references to any applicable notes found in Section 3.4. Insert abbreviations for each MEA identified in the table below, such as "A—Architect," or "C—Contractor." NOTE: LODs must be adapted for the unique characteristics of each Project.	Model Elements Utilizing CSI UniFormat TM	A SUBSTRUCTURE	A10 FOUNDATIONS	A1010 Standard Foundations (existing and new)	A1010.10 Wall Foundations	A1010.30 Column Foundations	A1010.90 Standard Foundation Supplementary Components	A1020 Special Foundations	A1020.10 Driven Piles

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A1020.15 Bored Piles							
A1020.20 Caissons							
A1020.30 Special Foundation Walls							
A1020.40 Foundation Anchors					100		
A1020.50 Underpinning (if required)							
A1020.60 Raft Foundations							
A1020.70 Pile Caps							
A1020.80 Grade Beams							
SUBGRADE ENCLOSURES							
A2010 Walls for Subgrade Enclosures							
A2010.10 Subgrade Enclosure Wall Construction							
A2010.20 Subgrade Enclosure Wall Interior Skin							
A2010.90 Subgrade Enclosure Wall Supplementary Components							
SLABS-ON-GRADE							
A4010 Standard Slabs-on-Grade							
Structural Slabs-on-Grade							
A4030 Slab Trenches							
A4040 Pits and Bases							
A4090 Slab-On-Grade Supplementary Components							
A4090.10 Perimeter Insulation							
A4090.20 Vapor Retarder							
A4090.30 Waterproofing							
A4090.50 Mud Slab							
A4090.60 Subbase Layer							
WATER AND GAS MITIGATION							
A6010 Building Subdrainage							
A6010.10 Foundation Drainage							
A6010.20 Underslab Drainage							
Off-Gassing Mitigation						34	
A6020.10 Radon Mitigation							

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Backfill and Compaction													
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Ground Freezing													
Slurry Walls													
Soil Treatment													
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SUPERSTRUCTURE													
Floor Construction	350	A-05								1988			
B1010.10 Floor Structural Frame (& K-Joist)	-	A-05											
B1010.20 Floor Decks, Slabs, and Toppings		A-05											
B1010.30 Balcony Floor Construction		A-05											
Mezzanine Floor Construction		A-05											
Ramps, Steel & Construction	350	A-05											
Floor Construction Supplementary Components	350	A-05											
Roof Construction									-				
B1020.10 Roof Structural Frame (& K-Joist)	350	A-05					Market ry to						
Roof Decks, Slabs, and Sheathing	350	A-05											
Canopy Construction		A-05				B							
Roof Construction Supplementary Components		A-05											
Stair Construction	350	A-05											
Stair Soffits	-	100											

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B2080.50 Exterior Balcony Walls and Railings										
B2080.70 Exterior Fabrications										
B2080.80 Bird Control Devices										
B2090 Exterior Wall Specialties										
B30 EXTERIOR HORIZONTAL ENCLOSURES										
B3010 Roofing										
B3010.10 Steep Slope Roofing										
B3010.50 Low-Slope Roofing										
B3010.70 Canopy Roofing										
B3010.90 Roofing Supplementary Components										
B3020 Roof Appurtenances										
B3020.10 Roof Accessories										
B3020.30 Roof Specialties (Limit Lines), Roof Hatches & Smoke										
B3020.70 Rainwater Management										
B3040 Traffic Bearing Horizontal Enclosures										
B3040.10 Traffic Bearing Coatings										
B3040.30 Horizontal Waterproofing Membrane										
B3040.50 Wear Surfaces										
B3040.90 Horizontal Enclosure Supplementary Components										
B3060 Horizontal Openings										
B3060.10 Roof Windows and Skylights										
B3060.50 Vents and Hatches										
B3060.90 Horizontal Opening Supplementary Components										
B3080 Overhead Exterior Enclosures										
B3080.10 Exterior Ceilings										
B3080.20 Exterior Soffits										
B3080.30 Exterior Bulkheads										
C Interiors										
C10 INTERIOR CONSTRUCTION										
C1010 Interior Partitions										

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C1010.90 Interior Part	Interior Partition Supplementary Components							
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C1020.10 Interior Ope	Interior Operating Windows							
C1020.20 Interior Fixe	Interior Fixed Windows							
C1020.50 Interior Spe-	Interior Special Function Windows							
C1020.90 Interior Win	Interior Window Supplementary Components							
C1030 Interior Doors								
C1030.10 Interior Swi	Interior Swinging Doors (All Door Types)							
C1030.20 Interior Ent	Interior Entrance Doors (All Door Types)							
C1030.25 Interior Slid	Interior Sliding Doors (All Door Types)			Y.	3			
C1030.30 Interior Fold	Interior Folding Doors (All Door Types)							
C1030.40 Interior Coil	Interior Coiling Doors (All Door Types)							
C1030.50 Interior Pan	Interior Panel Doors (All Door Types)							
C1030.70 Interior Spe	Interior Special Function Doors							
C1030.80 Interior Acc	Interior Access Doors and Panels							
C1030.90 Interior Doo	Interior Door Supplementary Components							
C1040 Interior Grilles and Gates	sa							
C1040.10 Interior Grilles	lles							
C1040.50 Interior Gates	es							
C1060 Raised Floor Construction	on							
C1060.10 Access Flooring	oring							
C1060.30 Platform/Stage Floors	age Floors							
C1070 Suspended Ceiling Construction	truction							
	Acoustical Suspended Ceilings							
	Suspended Plaster and Gypsum Board Ceilings							
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C1070.70	Special Function Suspended Ceilings							
C1070.90	Ceiling Suspension Components							
C1090 Interior Specialties	oecialties							
C1090.10	Interior Railings and Handrails							
C1090.15	Interior Louvers							
C1090.20	Information Specialties							
C1090.25	Compartments and Cubicles (Toilet Partitions)							
C1090.30	Service Walls							
C1090.35	Wall and Door Protection							
C1090.40	Toilet, Bath, and Laundry Accessories							
C1090.45	Interior Gas Lighting							
C1090.50	Fireplaces and Stoves							
C1090.60	Safety Specialties							
C1090.70	Storage Specialties							
C1090.90	Other Interior Specialties							
C20 INTERIOR FINISHES	IES							
C2010 Wall Finishes	hes							
C2010.10	Tile Wall Finish							
C2010.20	Wall Paneling							
C2010.30	Wall Coverings							
C2010.35	Wall Carpeting							
C2010.50	Stone Facing							
C2010.60	Special Wall Surfacing							
C2010.70	Wall Painting and Coating							
C2010.80	Acoustical Wall Treatment							
C2010.90	Wall Finish Supplementary Components							
C2020 Interior Fa	Interior Fabrications							
C2030 Flooring								
C2030.10	Flooring Treatment							
C2030.20	Tile Flooring							
C2030.30	Specialty Flooring							
C2030.40	Masonry Flooring							

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C2030.50 Resilient Flooring							
C2030.60 Terrazzo Flooring							
C2030.70 Fluid-Applied Flooring							
C2030.75 Carpeting							104
C2030.80 Athletic Flooring							
C2030.85 Entrance Flooring							
C2030.90 Flooring Supplementary Components							
Stair Finishes							
C2040.20 Tile Stair Finish							
C2040.40 Masonry Stair Finish							
C2040.45 Wood Stair Finish							
C2040.50 Resilient Stair Finish							
C2040.60 Terrazzo Stair Finish							
C2040.75 Carpeted Stair Finish							
Ceiling Finishes							
C2050.10 Plaster and Gypsum Board Finish							
C2050.20 Ceiling Paneling							
C2050.70 Ceiling Painting and Coating							
C2050.80 Acoustical Ceiling Treatment							
C2050.90 Ceiling Finish Supplementary Components							
Interior Finish Schedules							
CONVEYING	1						
Vertical Conveying Systems							
D1010.10 Elevators	350 A-05						
D1010.20 Lifts							
D1010.30 Escalators							
D1010.50 Dumbwaiters							
D1010.60 Moving Ramps							
Horizontal Conveying							

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	D3050 Facility HVAC Distribution Systems													

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D3050.10 Facility Hydronic Distribution	350	A-28													
D3050.30 Facility Steam Distribution	350	A-28													
D3050.50 HVAC Air Distribution	350	A-28													
D3050.90 Facility Distribution Systems Supplementary Components	350	A-28												-	
D3060 Ventilation															
D3060.10 Supply Air	350	A-28													
D3060.20 Return Air	350	A-28							100						
D3060.30 Exhaust Air	350														
D3060.40 Outside Air	350														
D3060.60 Air-to-Air Energy Recovery	350														
D3060.70 HVAC Air Cleaning	350														
D3060.90 Ventilation Supplementary Components	350	A-28													
D3070 Special Purpose HVAC Systems															
D3070.10 Snow Melting															
D40 FIRE PROTECTION				(
D4010 Fire Suppression															
D4010.10 Water-Based Fire-Suppression (MANDATORY)	0 350	A-26		l _p 2											
D4010.50 Fire-Extinguishing (MANDATORY)	350	A-26													
D4010.90 Fire Suppression Supplementary Components	350	A-26													
D4011 Spray Fireproofing	350	A-26													
D4030 Fire Protection Specialties															
D4030.10 Fire Protection Cabinets	350	A-26													
D4030.30 Fire Extinguishers	350	A-26													
D4030.50 Breathing Air Replenishment Systems															
D4030.70 Fire Extinguisher Accessories															
D50 ELECTRICAL															
D5010 Facility Power Generation															

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D5010.10	Packaged Generator Assemblies	305	A-30						
D5010.20	Battery Equipment	305	A-30						
D5010.30	Photovoltaic Collectors	305	A-30						
D5010.40	Fuel Cells	305	A-30						
D5010.60	Power Filtering and Conditioning	305	A-30						
D5010.70	Transfer Switches	305	A-30			30	g		3137710
D5010.90	Facility Power Generation Supplementary Components	305	A-30	Hi					
D5020 Electrical S	Electrical Service and Distribution								
D5020.10	Electrical Service	305	A-30						
D5020.30	Power Distribution	305	A-30						
D5020.70	Facility Grounding	305	A-30						
D5020.90	Electrical Service and Distribution Supplementary Components	305	A-30					A STATE OF THE PARTY OF THE PAR	
D5030 General Pur	General Purpose Electrical Power								
D5030.10	Branch Wiring System	305	A-30						
D5030.50	Wiring Devices	305	A-30						
D5030.90	General Purpose Electrical Power Supplementary Components	305	A-30			<u> </u>			
D5040 Lighting									
D5040.10	Lighting Control (Main Panels)								
D5040.20	Branch Wiring for Lighting								
D5040.50	Lighting Fixtures								
D5040.90	Lighting Supplementary Components								
D5080 Miscellaneo	Miscellaneous Electrical Systems								
D5080.10	Lightning Protection	305	A-30						
D5080.40	Cathodic Protection								
D5080.70	Transient Voltage Suppression							Ţ,	
D5080.90	Miscellaneous Electrical Systems Supplementary								

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De0 COM	D60 COMMUNICATIONS	NS									
D6010	Data Communications	nunications	305	A-30							
	D6010.10	Data Communications Network Equipment (Wire Rack)	305	A-30							
	D6020.20	Data Communications Hardware	305	A-30							
	D6010.30	Data Communications Peripheral Data Equipment	305	A-30							
	D6010.50	Data Communications Software									
	D6010.60	Data Communication Program and Integration Services									
D6020	Voice Communications	munications							3		
	D6020.10	Voice Communications Switching and Routing Equipment	305	A-30							
N. 1977 F. 1778	D6020.20	Voice Communications Terminal Equipment									
	D6020.30	Voice Communications Messaging									
W	D6020.40	Call Accounting									
	D6020.50	Call Management									
D6030		Audio-Video Communication									
	D6030.10	Audio-Video Systems									
	D6030.50	Electronic Digital Systems									
D909Q		Distributed Communications and Monitoring									
5	D6060.10	Distributed Audio-Video Communications Systems									
	D6060.30	Healthcare Communications and Monitoring									
	D6060.50	Distributed Systems									
D6090		Communications Supplementary Components						10-2	150		
	D6090.10	D6090.10 Supplementary Components									
D70 ELEC	TRONIC SAF	ELECTRONIC SAFETY AND SECURITY									
D7010		Access Control and Intrusion Detection									
	D7010.10	Access Control									
	D7010.50	Intrusion Detection									
D7030	3.1	Electronic Surveillance									
	D7030.10	Video Surveillance									
	D7030.50	Electronic Personal Protection									
D7050											

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Horticultural Equipment							
Decontamination Equipment							
				E		K	
E2010 Fixed Furnishings							
Fixed Art							
Window Treatments							
Casework							
Fixed Multiple Seating							
Other Fixed Furnishings							
Movable Furnishings							
Movable Art							
Furniture							
Accessories							
Movable Multiple Seating							
Other Movable Furnishings							
SPECIAL CONSTRUCTION AND DEMOLITION					- 17		
SPECIAL CONSTRUCTION							
F1010 Integrated Construction							
Building Modules							
Manufactured/Fabricated Rooms							
Modular Mezzanines							
Special Structures							
Fabric Structures							
Space Frames							
Geodesic Structures							
Manufacturer-Engineered Structures Trusses							
Manufactured Canopies							
Rammed Earth Construction							
Towers							
Special Function Construction							
Sound and Vibration Control							

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Radiation Protection								
Special Facility Components								
Pools								
Interior Fountains								
Interior Water Features								
Aquariums			3					
Amusement Park Structures and Equipment						B		
Ice Rinks								
Animal Containment								
Athletic and Recreational Special Construction								
Indoor Soccer Boards								
Safety Netting								
Arena Football Boards								
Floor Sockets								
Athletic and Recreational Court Walls								
Demountable Athletic Surfaces								
Special Instrumentation								
Stress Instrumentation								
Seismic Instrumentation								
Meteorological Instrumentation								
Earth Movement Monitoring								
FACILITY REMEDIATION								
Hazardous Materials Remediation								
Transportation and Disposal of Hazardous Materials								
Asbestos Remediation								
Lead Remediation								
Polychlorinate Biphenyl Remediation								
Mold Remediation								
Structure Demolition								

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F3010.30 Tower Demolition							
F3010.50 Bridge Demolition							
F3010.70 Dam Demolition	B		13		7		
F3030 Selective Demolition							
F3030.10 Selective Building Demolition							
F3030.30 Selective Interior Demolition							
F3030.50 Selective Bridge Demolition							
F3030.70 Selective Historic Demolition							
F3030 Structure Moving	in the second						
F3030.10 Structure Relocation					1/4		
F3030.30 Structure Raising							
G SITEWORK						ligit (
G10 SITE PREPARATION							
G1010 Site Clearing							
G1010.10 Clearing and Grubbing							
G1010.30 Tree and Shrub Removal and Trimming							
G1010.50 Earth Stripping and Stockpiling							
G1020 Site Elements Demolition		2					
G1020.10 Utility Demolition							
G1020.30 Infrastructure Demolition							
G1020.50 Selective Site Demolition							
G1030 Site Element Relocations							
G1030.10 Utility Relocation							
G1050 Site Remediation							
G1050.10 Physical Decontamination							
G1050.15 Chemical Decontamination							
G1050.20 Thermal Decontamination							
	His						
G1050 45 Sinkhole Remediation							

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G1050.50 Hazardous Waste Drum Handling	ling													
G1050.60 Contaminated Site Material Removal	emoval													
G1050.80 Water Remediation										5				
G1070 Site Earthwork														
G1070.10 Grading														
G1070.20 Excavation and Fill														
G1070.30 Embankments														
G1070.35 Erosion and Sedimentation Controls	ontrols													
G1070.40 Soil Stabilization														
G1070.45 Rock Stabilization														
G1070.50 Soil Reinforcement									1					
G1070.55 Slope Protection														
G1070.60 Gabions														
G1070.65 Riprap														
G1070.70 Wetlands														
G1070.80 Earth Dams														
G1070.90 Site Soil Treatment														
G20 SITE IMPROVEMENTS														
G2010 Roadways						1								
G2010.10 Roadway Pavement														
G2010.20 Roadway Curbs and Gutters														
G2010.40 Roadway Appurtenances														
G2010.70 Roadway Lighting														
G2010.80 Vehicle Fare Collection														
G2020 Parking Lots														
G2020.10 Parking Lot Pavement														
G2020.20 Parking Lot Curbs and Gutters														
G2020.40 Parking Lot Appurtenances				TA:										
G2020.70 Parking Lot Lighting										Į i				
G2020.80 Exterior Parking Control Equipment	pment													
G2030 Pedestrian Plazas and Walkways														
G2030.10 Pedestrian Pavement														

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§ 3.4 Model Element Table Notes Notes:

(List by number shown on table.)

Model Element Table is an add on document to all bid package noted above and relating to all contractors scope of work. The table identifies all bid package requirements to provide Building Information Models (BIM) during the BIM coordination process. In addition, refer to BIM protocol instruction to see LOD descriptions.

Contractors are required to attend coordination meetings, submit and post to BuildingBlok and maintain the BIM schedule production process.

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SECTION 23 0600

AIR DISTRIBUTION & ACCESSORIES - HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The general provisions of the contract, including the conditions of the contract (General, Supplementary and other Conditions, if any) and Division 1 as appropriate, apply to the work specified in this section.
- B. Refer to Section 230200 for HVAC General Provisions
- C. Refer to Section 230210 for HVAC Basic Materials & Methods.
- D. This Contractor shall coordinate with the work of Division 26 and the Fire Alarm System vendor for locations and mounting of all duct smoke detectors. These devices are shown on the Mechanical Drawings for reference only to show the intent of the work. All locations shall be determined based on approved shop drawings from the Fire Alarm System vendor and the Contractor for the work of Division 26, Electrical. Mount smoke detectors in the supply and return air stream at each unit in accordance with NFPA 72.

1.2 DESCRIPTION OF WORK

- A. This Section includes labor, material, equipment and supervision to provide a complete air distribution system as specified herein and as shown on drawings.
 - 1. Ductwork Single Wall, Square and Rectangular
 - 2. Ductwork Single Wall, Spiral Round
 - 3. Double Wall Round Duct
 - 4. Flexible Air Duct
 - 5. Flexible Connections
 - 6. Dampers
 - 7. Fire Dampers
 - 8. Combination Fire/Smoke Dampers or Smoke Dampers
 - 9. Air Diffusers, Registers and Grilles
 - 10 Prefabricated Roof Curbs and Equipment Supports
 - 11. Sound Attenuation
 - 12. Duct Access Doors (Interior)
 - 13. Fabric Air Dispersion Ductwork

14. Louver

1.3 REFERENCE STANDARDS

- A. Refer to Section 230200 for a general description of requirements applying to this section.
- B. Requirements established within the portions of the Project Manual titled Division 1, General Requirements, are collectively applicable to the work of this section.
- C. IMC (International Mechanical Code).
- D. SMACNA (Sheet Metal and Air Conditioning Contractors National Association, Inc.)
- E. American Society of Heating, Refrigerating and Air Conditioning Engineers' recommendations in ASHRAE Guide shall apply to this work.

- F. ARI Standard 885 Standard for Estimating Occupied Sound Levels in the Applications of Air Terminals and Air Outlets.
- G. UL (Underwriter's Laboratories, Inc.)
- H. NFPA 90A and 96 shall apply to this work.
- I. State Fire Prevention Regulations.
- 1.4 QUALITY ASSURANCE
 - A. Refer to Section 230210 for a general description of requirements applying to this Section.
- 1.5 SUBMITTALS
 - A. Submit shop drawings and product data in accordance with Section 230200.
 - B. Submit the following:
 - 1. Shop drawings of all sheet metal. Indicate all steel, piping, conduit, and Architectural/Structural features to demonstrate complete coordination. Scale shall not be less than 1/4".
 - a. Shop drawings shall indicate the sizes and lengths of each section of ductwork as well as all system components such as coils, access doors, dampers, diffusers and register locations. Also indicate the type of joints used and where internal acoustic lining or insulation, if required, will be utilized.
 - b. The location of the duct runs and the air outlets shall be closely coordinated with all other trades by the sheet metal contractor to avoid interference. The shop drawings shall show the contact surfaces adjacent to the ducts or air outlets and the space assigned for concealment. The drawings shall indicate principal items of equipment, adjacent piping and conduit, etc., the location of which shall be secured from the contractors of other trades.
 - c. Sheet Metal Contractor to include resubmissions of the shop drawings to the Engineer. The resubmissions are to include all corrections to previous submissions.
 - 2. Manufacturer's literature and performance data of all equipment and devices.
 - 3. Samples: Furnish color samples, etc., at request of the Architect.

1.6 SUBSTITUTIONS

A. The listed equivalent or substituted manufacturers along with the bidding related contractor shall be completely responsible to comply with all requirements on all contract documents. This shall include, but shall not be limited to space requirements, code clearances, the type, horsepower, capacities, number and size of services required from other trades, including all required ancillary items furnished and installed by other trades. If the manufacturer or related bidding contractor does not comply with these requirements, they shall be responsible for any and all additional costs associated with the changes required by other trades.

1.7 WARRANTY GUARANTEE

A. All work and materials are subject to the general warranty as described in the General Conditions of the Contract and in Division 1, General Requirements.

PART 2 - PRODUCTS

- 2.1 DUCTWORK (SINGLE WALL, SQUARE AND RECTANGULAR)
 - A. All ductwork shall be fabricated in accordance with SMACNA "HVAC Duct Construction Standards Metal and Flexible" latest Edition except as described below. The minimum thickness of metal ductwork is 26 gauge. Fabrication requirements shall be based on ductwork subjected to positive or negative pressures of 4" W.G. Ductwork systems shall be sealed to SMACNA "Seal

Class "A" Standards. Alternatively, "Ductmate" System 45 can be used in accordance with manufacturer's specifications. Drive slip joints are not permitted.

Exception: For ductwork <u>smaller</u> than 12" x 8", Contractor may provide slip and drive joints with all joints sealed with Hardcast tape and mastic system.

- B. Rectangular ducts for 4" W.G. or less, positive or negative pressure shall be per SMACNA Table 1-7. Longitudinal seams shall be Pittsburgh Lock Type L-l per SMACNA Figure 1-5. Transverse joints shall be standing seam type T -15 per Figure 1-4.
 - 1. In the event that material size is not compatible with duct size and segmenting must be utilized to fabricate duct, use SMACNA Figure 1-5, seam L-4 (Standing Seam).

C. Joints:

- 1. Per SMACNA Transverse Joint Reinforcement Table 1-12, only joints T -22, T -25a, T -25b and Proprietary slip on flanges will be acceptable.
- 2. Joints T -25a and T -25b that have stress fractures from bending will not be accepted.
- 3. All joints will have butyl gasket 3/16" thick by 5/8" wide installed per manufacturers installation instructions.
- D. Ductwork systems for this standard shall be galvanized sheet steel, commercial quality of lock forming grade, conforming to ASTM coating standards A-525 or A-527 with coating of designation G-60. For corrosive or moist conditions, use coating designation G-90.
 - 1. Where the outer surface of the duct is exposed in finished spaces and is <u>not</u> scheduled for insulation, duct material shall be galvannealed, suitable for field painting by the General Contractor.
- E. The size and configuration of each duct shall be indicated on design drawings. Where thicker sheets or different types of materials are required, they shall be specified on the design drawings or in the project specifications.
- F. Aluminum Rectangular Ductwork:
 - 1. Aluminum ductwork shall be two B.& S. gauges heavier than specified for the equivalent width steel ductwork. Bracing, supports and joints shall be as specified for steel ductwork.
 - 2. Aluminum ducts shall be used where the ducts are concealed when exhausting saturated air from dishwashing, showers, outside air intakes and similar designated spaces.
 - 3. Dishwashing exhaust ducts shall be made watertight by means of silicone or 3M duct sealant properly installed and compressed at each joint and seam.
- G. Kitchen exhaust duct shall have all joints, seams, penetrations and duct-to-hood collar connections with continuous, external, liquid-tight welds.
 - 1. Carbon Steel: Fabricate from 16-gauge, ASTM-A569 hot rolled or ASTM-A366.
 - 2. Stainless Steel: Fabricate from 18-gauge, Type 304, 2D finish.
 - 3. Option: Factory fabricated grease duct system, U.L. listed, which meets all the requirements of NFPA 96.

2.2 DUCTWORK (SINGLE WALL, SPIRAL ROUND)

- A. Design Pressure: 2"
- B. Leakage: All ductwork shall meet SMACNA Class "A" leak standards.
- C. Fabrication:
 - 1. Gauges, reinforcing angles, seams, joints, fabrication methods, installation methods and practices, duct reinforcement, fabricated dampers and devices installed in duct system,

- fittings, etc., shall conform to the latest editions of SMACNA standards for construction in accordance with requirements indicated in these specifications.
- 2. Minimum metal gauges shall be 26 gauge (.019). Follow SMACNA Table 3-2A for Positive pressure and Table 3-2B for Negative pressure.
- 3. Where the outer surface of the duct is exposed in finished spaces and is <u>not</u> scheduled for insulation, duct material shall be galvannealed, suitable for field painting by the General Contractor.

D. Joints:

- 1. Duct up to 36" diameter Male/Female beaded slip joint similar to SMACNA Figure 3-2, joint RT-1 or RT-5, as long as it meets the criteria for the system design pressure. Fittings shall be undersized to fit into spiral duct. All joints shall be secured with a minimum of 4 screws on each duct section (equally spaced). Seal joint with an approved sealant compound, continuously applied prior to assembly of joint and after fastening, making certain that the majority of the sealant resides on the interior of the joint.
- 2. In lieu of beaded slip, there are proprietary connections that may be used, as long as they meet the pressure criteria set forth in this specification.

2.3 DOUBLE WALL ROUND DUCT

A. Double wall round duct will be constructed of perforated inner liner, a 2 inches layer of fiberglass insulation, and an outer pressure shell. Duct will be spiral lock seam construction provided in standard 10 foot lengths. It will be fabricated from galvanized steel meeting ASTM-A527 standards, and in accordance with the following guidelines:

Inner Diameter	Outer Shell Min. Gauge		
(Inches)	(2-10 inches WG)	Inner Gauge	Fitting Gauge
3-8	26	26	24
9-12	26	26	24
13-24	24	26	24
25-34	22	26	24
36-42	20	26	22

- B. For 2 inch insulation, the outer shell will be 4 inches larger than the inner liner nominal dimension. When a perforated liner is specified, perforations will be 3/32 inch in diameter with an overall open area of 23 percent. Insulated duct will have a maximum thermal conductivity (k) factor of 0.27 Btu/Hr ./SF/inch at 75 deg. F mean ambient temperature.
- C. Follow SMACNA Table 3-2A for Positive Pressure and Table 3-2B for Negative Pressure.

D. Joints:

1. Duct up to 16" diameter, Male/Female beaded slip joint similar to SMACNA Figure 3-2, Joint RT-1 or RT-5, as long as it meets the criteria for the system design pressure. Fittings shall be undersized to fit into spiral duct. All joints shall be secured with a minimum of 4 screws on each duct section (equally spaced). Seal joint with an approved sealant compound, continuously applied prior to assembly of joint and after fastening, making certain that the majority of the sealant resides on the interior of the joint. The inner liner slip connection shall be a minimum of 2" longer than the outer wall slip connection. Sealant is not required on the inner wall slip.

- 2. Duct 17" 60" diameter, Accuflange@ joint as manufactured by Accuduct, Inc. Installation is to be per manufacturer's recommendations. Companion angle Vanstone with full face gaskets having bolt holes punched through prior to insertion of bolts may be used in lieu of Accuflange. Gasketing to be 1/8" thick. Joint is per SMACNA Figure 3-2, joint RT -2 and RT -2A.
- E. Finish: Where the outer surface of the duct is exposed in finished spaces and is not scheduled for insulation, duct material shall be galvannealed, suitable for field painting by the General Contractor.

<u>Note:</u> Type RT-2 or RT-3 joints are acceptable for concealed work or exposed in Mechanical Rooms. For exposed work in finished spaces, use RT-3 only.

2.4.a FLEXIBLE AIR DUCT

- A. Insulated flexible air duct shall be non-metallic. Air duct shall comply with the latest NFPA Bulletin No. 90A and be labeled as Class 1 Air Duct, U.L. Standard No. 181.
- B. Air ducts shall be suitable for working pressure of not less than plus 10.0 and minus 0.5 inches of W.G.
- C. Non-metallic air duct shall be two element spiral construction composed of a corrosion resisting metal supporting spiral and a vinyl coated fiberglass base fabric and shall be mechanically interlocked together.
- D. Insulation shall be 1-1/2" thick fiberglass flexible blanket with vapor barrier outer jacket of polyethylene or reinforced mylar. Maximum thermal conductance of 0.23 Btu/Hr./SF/Inch at 75 deg. F temperature.
- E. Approved manufacturers shall include the Wiremold Company, Flexmaster USA, Owens-Corning, Thermaflex Flex Vent.
- 2.4.b ACOUSTICAL FLEXIBLE AIR DUCT (Auditorium, Band, Orchestra, Chorus, and other Music Rooms in Area 'E')
 - A. Core material shall be an acoustical spun bond nylon fabric supported by helically wound galvanized steel. The fabric shall be mechanically fastened to the steel helix without the use of adhesive. The core shall maintain its free area and a center line radius of 1.0 or better.
 - B. The internal working pressure rating shall be at least as follows with a bursting pressure of at least 2½ times the working pressure.
 - 1. Positive: 6 inches W. G.
 - 2. Negative: 5 inches W. G.
 - C. The duct shall be rated for a velocity of at least 5,500 feet per minute.
 - D. Suitable for operating temperatures of at least 250°F.
 - E. Minimum Acoustic Performance:
 - 1. The insertion loss (dB) of a 9-foot length of duct when tested in accordance with ASTM E 477 at a velocity of 2,500 feet per minute shall be at least:

	125 Hz	250 Hz	500 Hz	1,000 Hz	2,000 Hz	4,000 Hz
1) 8-inch dia.	27	27	32	33	37	33
2) 12-inch dia.	24	23	30	31	37	25

- F. Insulation shall be fiberglass flexible blanket with metalized vapor barrier, rated for R6.
- G. Manufacturer: Flexmaster USA

2.5 FLEXIBLE CONNECTIONS

- A. Required between ductwork and suction and discharge connection of all fans and air handlers.
- B. Material: Woven fiberglass with mounting hardware tested in accordance with UL Standard 181, listed and labeled as Class 0 or 1.
- C. Manufacturer: Ventfabrics, Inc., Durodyne, Dynair, Ductmate Pro Flex.

2.6 DAMPERS

- A. Provide where indicated and required to control flow of air and balance system.
- B. Round dampers shall be single blade, molded synthetic bearings at each end, 20-gauge galvanized steel, adjusting quadrant and locking device. Round dampers shall be Ruskin Model MDRS25.
- C. Rectangular and square dampers shall be opposed blade within 16-gauge galvanized steel channel frame with corner brace, 16-gauge galvanized steel blades; molded synthetic bearings and hex steel shafts, exposed or concealed linkage, adjustable quadrant and locking device. Dampers 10" and below shall be single-blade. Dampers shall be Ruskin Model MD35.
- D. Approved Manufacturers: Ruskin, Arrow, Nailor-Hart, Pottorff, Lloyd Industries, Inc., Cesco Products, Louvers & Dampers, United Enertech.

2.7 FIRE DAMPERS

- A. Fabricate in accordance with NFPA 90A and UL 555.
 - 1. Ceiling Dampers: Galvanized steel, 22-gauge frame and 16-gauge flap, two layers 0.125 inch ceramic fiber on top side with locking clip.
 - 2. Horizontal Dampers: Galvanized steel, 22-gauge frame, stainless steel closure spring, and lightweight, heat retardant, non-asbestos fabric blanket.
 - 3. Curtain Type Dampers: Galvanized steel with interlocking blades. Provide stainless steel closure springs and latches for closure under air flow conditions. Configure with blades out of air stream except for 1.0 inch pressure class ducts up to 12 inches in height.
 - 4. Multiple Blade Dampers: 16 gauge galvanized steel frame and blades, oil-impregnated bronze or stainless steel sleeve bearings and plated steel axles, 1/8 x ½ inch plated steel concealed linkage, stainless steel closure spring, blade stops and lock.
 - 5. Fusible Links: UL 33, separate at 160 deg. F with adjustable link straps for combination fire/balancing dampers.
- B. Fire dampers of the applicable rating shall be provided at all locations where ductwork penetrates fire-rated walls, ceilings, or floors. Refer to Architectural Drawings.
- C. Manufacturers: Air Balance, Inc., Ruskin, Louvers & Dampers, Prefco, Phillips-Aire, Metalaire, Pottorff, Lloyd Industries, Inc., Cesco Products, Greenheck, United Enertech.

2.8 COMBINATION FIRE/SMOKE DAMPERS

- A. Combination fire/smoke dampers shall be parallel blade, steel damper, factory assembled with fusible link rated for 165 deg. F and 1-1/2 hour unless noted otherwise.
- B. Standards: Design and construction of damper assembly shall conform to:
 - 1. UL555
 - 2. UL555S
 - 3. NFPA 90A
 - 4. AMCA Std. 511.
- C. Construction shall be:
 - 1. 16-gauge galvanized steel frame.

- 2. 22-gauge galvanized steel blades
- 3. Bronze oilite bearings.
- 4. Stainless steel closing springs.
- 5. 14-gauge galvanized steel wall sleeve.
- 6. Stainless steel side seals.
- D. Basis of design shall be Prefco Model 5800 MB2 Electric Motor actuator, 120V, Belimo Air Controls, Inc. Model FSNF120
- E. Provide end switch to indicate damper position. Locate damper operator on exterior of duct and link to damper operating shaft.
- F. Manufacturers: Fire smoke damper shall be Prefco Products, Inc., Model 5050-1, Ruskin, Air Balance, Lloyd Industries, Inc., Pottorff, Cesco Products, Greenheck, United Enertech.

OR

2.8 SMOKE DAMPERS

- A. Fabricate in accordance with NFPA 90A and UL 555S, and bear seal for AMCA Std. 511 compliance. Smoke dampers shall be listed and labeled.
 - 1. Dampers: UL Class 1 multiple blade type damper, normally open automatically operated by electric actuator. Provide electric actuator with damper. Provide end switch with any damper which would block total supply airflow if closed.
 - 2. Operator shall be 24 VAC with spring return on power failure and feedback feature to monitor damper position, Belimo Air Controls, Inc., Model FSAF24.
 - 3. Provide interface with Building Fire Alarm System.
- B. Manufacturers: Prefco Products, Inc., Ruskin, Air Balance, Lloyd Industries, Inc., Pottorff, Cesco Products, Greenheck, United Enertech.

2.9 AIR DIFFUSERS, REGISTERS AND GRILLES

A. Air diffusing terminals shall be provided in duct runs on drawings. The diffusers shall properly and uniformly distribute the design air quantity with no objectionable drafts, while maintaining not more than 50 F. P. M. velocity in the occupied portion of the space.

B. Ceiling Diffusers:

- 1. Square Louvered Diffuser Face:
 - a. Square housing, welded steel construction core of square concentric louvers, removable at face of diffuser, round duct connection, with borders suitable for lay-in ceiling tile application.
 - b. Diffuser Patterns: Fixed louver face for 1, 2, 3, or 4 direction air flow, direction indicated on drawings.
 - c. Finish: Matte white finish.
 - d. Manufacturers: Price Model SMD

2. Linear Diffusers:

- a. Linear diffusers shall be horizontal continuous slot type with multiple slots per the schedule and drawings. Construction shall be extruded aluminum with 1/2", 3/4" or 1 " slots. The diffusers shall have integral devices to equalize air flow over the entire length of the diffuser.
- b. Multiple sections of diffusers shall be installed in a continuous arrangement, the butt ends shall be provided without flanges to provide a continuous effect. Multiple sections shall

be aligned and fastened with alignment pins and slots or a similar method.

c. Linear diffusers shall be provided with adjustable vanes to provide horizontal, vertical or midway patterns of air diffusion. Finish as selected by Architect.

3. Round Cone Diffusers:

- a. Adjustable round cone diffuser, welded steel construction with round neck and removable inner assembly of cones.
- b. Air pattern shall be field adjustable from horizontal to vertical.
- c. Finish: Matte white finish
- d. Price Model RCD

C. Registers & Grilles:

1. Registers and grilles shall be steel construction, fixed single deflection type, with clips and/or flange holes and screws (as required by Architectural finishes) to secure registers to ceiling construction. Face bars shall be inclined 30 degrees. Registers and grilles shall be factory primed and painted with a baked-on white enamel finish.

2. Wall Supply Registers:

- a. Provide manufacturer's standard wall registers where shown; of size, shape, capacity, type of materials and components indicated.
- b. Register Materials: Steel construction: Manufacturer's standard stamped sheet steel frame and adjustable blades.
- c. Register Faces: Horizontal Straight Blades, individually adjustable, at manufacturer's standard spacing.
- d. Register Patterns: Double Deflection: 2 sets of blades in face, rear set at 90 degrees to face set.
- e. Register Finishes: Aluminum Enamel: Air-dried aluminum enamel prime finish.

3. Supply Grilles (SG):

- a. Aluminum supply grilles shall be available parallel to the long dimension of the grille. All supply grilles shall be constructed with a 11/4-inch wide heavy aluminum border having a minimum thickness of 0.040-0.050 inch. Outer borders shall be assembled and interlocked at the four corners and mechanically staked to form a rigid frame. Screw holes shall be countersunk for a neat appearance.
- b. Blades shall be constructed of heavy duty aluminum and shall be contoured to a specifically designed airfoil cross-section to meet published performance data. Where indicated in drawing schedule or plans opposed-blade volume damper shall be constructed of heavy gauge steel or aluminum.
- c. The finish shall be #26 white. The finish shall be a baked on anodic acrylic paint, with a pencil hardness of HB to H.
- d. Price Model 22

4. Ceiling Return Grille (CR):

a. Ceiling grilles shall have a perforated face with 3/16-inch diameter holes on 1/4-inch staggered centers and no less than 51 percent free area. Perforated face shall be aluminum according to the model selected. The back pan shall be one piece stamped heavy gauge steel of the sizes and mounting types shown on the plans and outlet schedule.

- b. The finish shall be #26 white. The finish shall be a baked on anodic acrylic paint, with a pencil hardness of HB to H. Inside of back pan shall be painted flat black.
- c. Price Model PDDR
- 5. Return, Exhaust and Transfer Grilles (RG, EG & TG):
 - a. Grilles shall be available parallel to the long dimension of the grille. Construction shall be of steel with a 11/4-inch wide border on all sides. Screw holes shall be countersunk for a neat appearance. Corners shall be welded with full penetration resistance welds.
 - b. Deflection blades shall be firmly held in place by mullions from behind the grille and fixed to the grille by welding in place. Blade deflection angle shall be available at 35°.
 - c. The finish shall be #26 white. The finish shall be a baked on anodic acrylic paint, with a pencil hardness of HB to H.
 - d. Price Model 535 FL(RG,EG & TG)
- 6. Heavy-Duty Return Grille
 - a. Grille shall be 45-degree deflection fixed louver type with blades spaced 3/4" on center.
 - b. The outlet shall have 14-gauge steel blades and heavy duty steel support bars and frames.
 - c. Blades shall run parallel to the long dimension of the grille.
 - d. The finish shall be #B12 white. The finish shall be a baked on anodic acrylic paint.
- 7. Ceiling Louvered Return Filter Grille (CR):
 - a. Return filter grilles shall be of size and mounting type as shown on the drawings and schedules.
 - b. Borders shall be constructed of steel with countersink holes or frame suitable for ceiling finish in each room.
 - c. The four corners shall be interlocked and mechanically staked to form a rigid frame.
 - d. Deflection blades shall be ½ inch spacing, 45° deflection.
 - e. Return grilles shall be provided with a filter frame that will accommodate a standard 1-inch thick disposable filter to fit the specified duct size. Filter shall be grille module size minus 4 inches. Filter capacity shall be as scheduled on the drawings.
 - f. Return grille finish shall be white powder coat.
 - g. Price Model 535FF
- D. Manufacturers: Provide diffusers, registers and grilles of one of the following:

Anemostat Price Carnes Co. Titus

Krueger Tuttle & Bailey
Metalaire Nailor Industries

2.10 PREFABRICATED ROOF CURBS AND EQUIPMENT SUPPORTS

- A. Factory fabricated by the manufacturer of the respective roof-mounted equipment when available and capable of meeting the following requirements:
 - 1. Thermally and acoustically insulated, rubber isolating pads.
 - 2. Built to suit slope of roof and type of roofing; i.e. standing metal seam with integral cant strip and flashing extension.
 - 3. 12" height unless otherwise indicated.

- 4. Support rails shall be aluminum, or sheet steel, with continuous wood nailer and removable counterflashing.
- B. Curbs shall be a product of a custom manufacture in the following cases:
 - 1. Curbs as specified are not available from the respective equipment manufacturer.
 - 2. Piping or ducts penetrating roof.
 - 3. Prefabricated equipment supports are required.
 - 4. Step flashing assembly, EPDM for normal use and silicone for pipe temperatures above 200°F stainless steel clamp, suitable for single or multiple pipes.
- C. Pipe supports shall be a product of a custom manufacture equal to Pipe Prop as made by JMB Industries, or Anvil International Haydon H-Block.
- D. Manufacturers: Pate, Shipman, Custom Curb, Portals Plus, Lloyd Industries, Inc.

2.11 SOUND ATTENUATION

- A. Provide silencers of the types and sizes shown on plans.
- B. Materials and Construction:
 - 1. Outer casings of rectangular silencers shall be made of 22 gauge galvanized steel in accordance with ASHRAE Guide recommended construction for high pressure rectangular duct work. Seams shall be lock formed and mastic filled.
 - 2. Outer casings of tubular silencers shall be made of galvanized steel.
 - 3. Interior partitions for rectangular silencers shall be made of not less than 26 gauge galvanized perforated steel.
 - 4. Interior construction of tubular silencers shall be compatible with the outside casings.
 - 5. Filler material shall be of inorganic mineral or glass fiber of a density sufficient to obtain the specified acoustic performance and be packed under not less than 5 % compression to eliminate voids due to vibration and settling. Material shall be inert, vermin and moisture-proof.
 - 6. Combustion rating for the silencer acoustic fill shall be not less than the following when tested in accordance with ASTM-E-84, NFPA Standard 255 or UL No. 723:

Flamespread Classification 25 Smoke Development Rating 15 Fuel Contribution 20

- 7. Airtight construction shall be provided by use of a duct sealing compound on the job site. Material and labor furnished by contractor. Silencers shall not fail structurally when subjected to a differential air pressure of 8 in. w.g. inside to outside of casing.
- C. Acoustic Performance: Silencer ratings shall be determined in a duct- to-reverberant room test facility which provides for airflow in both directions through the test silencer in accordance with ASTM Specification E-477. The test set-up and procedure shall be such that all effects due to end reflection, directivity, flanking transmission, standing waves and test chamber sound absorption are eliminated. Acoustic ratings shall include Dynamic Insertion Loss (DIL) and Self- Noise (SN) Power Levels both for Forward Flow (air and noise in same direction) and Reverse Flow (air and noise in opposite directions) with airflow of at least 2000 fpm entering face velocity.
- D. Aerodynamic Performance: Silencer shall be of the low static pressure loss type. Airflow measurements shall be made in accordance with ASTM specification E-477 and applicable portions of ASME, AMCA and ADC airflow test codes. Tests shall be reported on the identical units for which acoustic data is presented.

- E. Certification: With submittals, the manufacturer shall supply certified test data on Dynamic Insertion Loss, Self-Noise Power Levels, and Aerodynamic Performance for Reverse and Forward Flow test conditions. Test data shall be for a standard product. All rating tests shall be conducted in the same facility, shall utilize the same silencer, and shall be open to inspection upon request from the Architect/Engineer.
- F. Manufacturers: Industrial Acoustics Co., Rink, Commercial Acoustics, Dynasonics, BRD, Pottorff, Vibro-Acoustics, Price.
- 2.12 DUCT ACCESS DOORS (Interior Locations)
 - A. SMACNA standard duct access doors shall be fabricated with 22-gauge galvanized steel door and frame with double wall construction.
 - 1. Doors shall be fabricated of aluminum when installed in aluminum ductwork and stainless steel to match special duct systems.
 - B. Continuous piano type hinge, same material as door.
 - C. Latches shall be sash type locks equal to Ventlock 100 latches.
 - 1. Doors 16" and under shall have one latch.
 - 2. Doors over 16" shall have two latches.
 - D. Door seals shall be foam gasket material continuously bonded to perimeter of door frame.
 - E. Door insulation shall be 1" thick fiberglass, minimum 1.5 pcf density.
 - F. Doors shall be able to withstand 3" W.C. static pressure up to 12" x 12" in size; 2" W.C. above that size.
 - G. Makes: Cesco Products, Karp Co., Nailor-Hart Industries, Pottorff, Lloyd Industries, Inc., Ductmate Industries, Inc.

2.13 FABRIC AIR DISPERSION DUCTWORK

A. Product shall be constructed of a coated woven fire-retardant fabric complying with the following physical characteristics:

1. Type: Verona

2. Configuration: Standard: round

3. Fabric Construction: Plain polyester weave.

4. Coating: Porous.

5. Weight: 5.2 oz. per square yard.

6. Permeability: 2 cfm per square foot @ 0.5" WC

7. Color: Standard color as selected by the Architect8. Warranty: 5 years on products for the fabric system

9. Temperature Range: 0 degrees F to 180 degrees F

10. Fire Retardancy: Classified by Underwriters Laboratories in accordance with the 25/50 flame spread/smoke developed requirements of NFPA 90-A.

- B. Systems Fabrication Requirements:
 - 1. Air dispersion accomplished by round vent, and consist of open orifices rather than a mesh style vent to reduce maintenance requirements (common to mesh style).
 - 2. Size of and location of vents shall be specified and approved by manufacturer.

- 3. Inlet connection to metal duct via fabric draw band with anchor patches supplied by manufacturer. Anchor patches shall be secured to metal duct via. zip screw fastener supplied by contractor.
- 4. Inlet connection includes zipper for easy removal / maintenance.
- 5. Lengths to include required zippers as specified by manufacturer.
- 6. System to include Adjustable Flow Devices to balance turbulence, airflow and distribution as needed. Flow restriction device shall include ability to adjust the airflow resistance from 0.06 0.60 in w.g. static pressure.
- 7. End cap includes zipper for easy maintenance.
- 8. Fabric system shall include connectors to accommodate suspension system listed below.
- 9. Any deviation from a straight run shall be made using a gored elbow or an efficiency tee. Normal 90-degree elbows are 5 gores and the radius of the elbow is 1.5 times the diameter of the DuctSox.

C. Design Parameters:

- 1. Fabric air diffusers shall be designed from 0.25" water gage minimum to 3.1" maximum, with 0.5" as the standard.
- 2. Fabric air diffusers shall be limited to design temperatures between 0 degrees F and 180 degrees F.
- 3. Design CFM, static pressure and diffuser length shall be designed and approved by the manufacturer.
- 4. Do not use fabric diffusers in concealed locations.
- 5. Use fabric diffusers only for positive pressure air distribution components of the mechanical ventilation system.

D. Suspension Hardware:

- 1. Internal Hoop System: Provide a factory fabricated retention system consisting of an internal 360° hoop system spaced on maximum 5' centers. Each hoop shall be fabricated of lightweight aluminum ring and tubing with negligible effect on airflow static resistance. The rings located at the inlet and end of run shall include tensioning anchor clips to secure the fabric to the hoop system. Sizes shall include 8" to 36" diameter in 2" increments. The system shall be installed with a one row suspension system located 1.5" above top dead center of the fabric duct system. System attachment shall be either cables or u-track using gliders spaced 12" on center.
- E. Manufacturer: Duct Sox by Fabric Air Dispersion Products, Fabric Air Inc., or KE Fibertec.

2.14 LOUVERS

- A. All wall louvers for intake shall be stationary stormproof type.
- B. Construction shall be of extruded aluminum with 0.081-inch-thick blades and frames and all fastening shall be aluminum or stainless steel.
- C. An aluminum expanded metal bird screen with frame shall be secured to the rear face of the louver assembly.
- D. Depth of the louver frame shall be 6" unless otherwise indicated.
- E. Performance Rating:
 - 1. Free Area: Louvers shall have a minimum of 50% free area based on a 48-inch-high by 48-inch-wide size.

- 2. Air Performance: Not more than 0.08-inch WG static pressure drop at 700 FPM free area intake velocity.
- 3. Water Penetration: Maximum of 0.01 ounces per square foot of free area at an air flow of 750 feet per minute free area velocity when tested for 15 minutes.
- F. The surface areas shall be factory anodized finish of color selected by Architect.
- G. Manufacturers: Airsteam Products Co., Air Balance, Inc., Carnes CO., Arrow Co., Empco, Pottorff, Cesco, Lloyd Industries, Inc., Ruskin, Louvesr & Dampers, United Enertech, NCZ Manufacturing, Inc.

PART 3 – EXECUTION

3.1 DUCTWORK

- A. Dimensions on drawings are inside dimensions. Sheet metal dimensions shall be increased to suit thickness of acoustic duct lining, if applicable. Ductwork that is lined with acoustic lining is not insulated.
- B. Ducts shall be concealed unless otherwise indicated.
- C. Changes in direction shall be made with radius bends or turning vanes.
- D. Supports shall be galvanized steel for steel ductwork and aluminum for aluminum ductwork.
- E. Locate ceiling air diffusers, registers, and grilles on "Reflected Ceiling Plans". Unless otherwise indicated, locate units in center of acoustical ceiling modules.
- F. Do not install ductwork directly above any electrical equipment.
- G. Ductwork shall be supported per SMACNA Standards except as follows:
 - 1. Rivet or screw to side of duct when using flat strap hangers. Rivet or screw to bottom of duct when using trapeze hangers.
 - 2. Extend hangers down the side of the duct at least 9"; pass hangers under ducts less than 9" deep.
 - 3. Space hangers not more than 8' on centers for ducts up to 18" wide and 4' on centers for ducts over 18" wide.
 - 4. Wire hangers are not acceptable.
 - 5. Support ductwork from building structure with expansion bolts, rods, steel angles or channels installed to meet existing or new building conditions.
 - 6. Drilling into the roof deck is not permitted.
 - 7. Driving nails into anchors is not permitted.

H. Air Flow Control:

- 1. Major take-offs: Install volume control dampers.
- 2. Branches: Install volume control dampers in all branches and at tap in branch take-off connections.
- 3. Elbows: Use unvaned elbows with throat radius equal to width of duct and full heel radius; provide turning vanes where full throat and heel radius are not possible.
- 4. Transitions: Make transitions in ducts as required by structural or architectural interferences.
 - a. Proportion airways to compensate for any obstructions within duct.
 - b. Avoid dead ends and abrupt angles.
 - c. Do not exceed 15 degrees slope on sides of transitions.

3.2 FLEXIBLE AIR DUCT

- A. When flexible duct is used for final connection between duct mains on branches and diffusers on registers. The maximum length of flexible ductwork shall be 5'-0" in length.
- B. Flexible ductwork shall be properly hung at the tap collar in order to prevent eventual wear and damage to the flexible duct.
- C. The ceiling tile system should not be considered a support on which to lay flexible duct. Refer to SMACNA Standards for proper installation.

3.3 LOUVERS

- A. Locate and place louver units level, plumb, and at indicated alignment with adjacent work.
- B. Use concealed anchorage where possible.
- C. Provide perimeter reveals and openings of uniform width for sealants and joint fillers.
- D. Repair damaged finishes so no evidence remains of corrective work. Return items that cannot be refinished in the field to the factory, make required alterations and refinish entire unit or provide new units.
- E. Protect galvanized and non-ferrous metal surfaces from corrosion or galvanic action by applying a heavy coating of bituminous paint on surfaces that will be in contact with concrete, masonry or dissimilar metals.

3.4 DUCT SYSTEM LEAK SEALING

- A. Joints in duct systems at duct heaters, fire dampers, sound traps, and supply air terminals shall be sealed to prevent air leakage.
- B. All duct joints and seams in medium pressure and high-pressure duct systems shall be sealed to SMACNA Seal Class" A" Standards to prevent air leakage.
- C. In the event there is in excess of 5% air leakage indicated in low pressure duct systems, it shall be the Contractors responsibility to seal the duct system. The amount of sealing necessary shall be that required to obtain the design air quantity at each terminal.
- D. Duct sealing shall be by means of high velocity duct sealants such as Hardcast and/or Neoprene gaskets. Type of sealant and method of application shall conform to recommendations in SMACNA high velocity duct construction standards.

3.5 DUCTWORK TESTING

- A. The following ductwork shall be pressure leak tested:
 - 1. Supply ductwork
 - 2. Return ductwork
 - 3. Exhaust ductwork
 - 4. Outside air intake ductwork
- B. Pressure leak test the following:
 - 1. All ductwork within chases
 - 2. 10% of all ducts
 - 3. 100% of all major equipment (ERUs, RTUs, AHUs, EFs, etc.)
 - 4. 10% of all equipment (FCUs, HPs, etc.)
- C. All tests shall be conducted in accordance with AABC National Standards.
- D. Ducts to be tested at 100% maximum of static pressure before any duct is insulated externally and concealed in accordance with SMACNA Standards.

- E. Calculate the allowable leakage using leakage factor of 5% of Design Air Flow.
- F. Select a limited section of duct for which the estimated leakage will not exceed capacity of the test apparatus.
- G. Connect the blower and flow meter to the duct section and provide temporary seals at all openings of the ductwork.
- H. Start the blower motor with the inlet damper closed. Increase pressure until the required level is reached.
- I. Read the flow meter and compare the leakage in cfm. Reading should be 5% or less of design flow for the duct segment being tested.
- J. If reading is more than 5% of design flow, depressurize duct, repair all leaks and retest until 5% or less of design flow is obtained.
- K. Complete test reports and obtain Owner's witness signature.
- L. Remove all temporary blanks and seals.
- M. Warning: Do not overpressure duct.

3.6 EQUIPMENT

- A. Test apparatus shall consist of an airflow measuring device, flow producing unit, pressure indicating devices and accessories necessary to connect the metering system to the test specimen.
- B. The Contractor conducting tests shall arrange for or provide all temporary services, all test apparatus, all temporary seals and all qualified personnel necessary to conduct the specified testing.
- C. Test apparatus shall be accurate within plus or minus 7.5% at the indicated flow rate and test pressure and shall have calibration data or a certificate signifying manufacture of the meter in conformance with the ASME Requirements for Fluid Meters. Verification of above, to be supplied to Owner upon request.
- D. Pressure differential sensing instruments shall be readable to 0.05" scale division for flow rates below 10 cfm or below 0.5" w.g. differential. For flows greater than 10 cfm scale divisions of 0.1" are appropriate. U-tube manometers should not be used for reading less than 1" of water.
- E. Liquid for manometers shall have a specific gravity of 1 (as water) unless the scale is calibrated to read in inches of water contingent on use of a liquid of another specific gravity, in which case the associated gauge fluid must be used.
- F. Instruments must be adjusted to zero reading before pressure is applied.

3.7 TEST REPORT

- A. Log the project and system identification data.
- B. Enter the fan CFM, the test pressure, and the leakage class specified by the designer.
- C. Enter an identification for each duct segment to be tested.
- D. Calculate the allowable leakage factor. Enter this number on the report for each test segment.
- E. Conduct and record the field tests. If the sum of the CFM measured is less than or equal to the sum of the allowable leakage, the test is passed. Record the date(s), presence of witnesses and flow meter characteristics.
- F. Maintain a mechanical duct plan of all tested duct segments. Plan to include duct segment identification and dates tested.
- G. Test reports shall be submitted as required by the project documents.
- 3.8 LABELING

A. At all fire damper, smoke damper, and combination fire/smoke locations, access doors in ductwork shall be identified with a permanent placard of red-white-red laminated commercial grade plastic construction, minimum one-half inch high capital letters, reading, "FIRE DAMPER", "SMOKE DAMPER", "FIRE/SMOKE DAMPER" as appropriate for the installation. Attach securely to face of access door with brass screws at each corner, sealed airtight.

END OF SECTION 23 0600

SECTION 274117

SOUND, VIDEO, & COMMUNICATION SYSTEMS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Work of this Section, as shown or specified, shall be in accordance with the requirements of the Contract Documents.

1.02 WORK INCLUDED

A. The Sound, Video & Communication System Contractor (SVCC) shall be responsible for all labor, equipment, material, and procedures required for the supply, fabrication, installation, commissioning, and warranty of the Sound, Video & Communication System (SVC) as specified herein and on the SVC Contract Drawings, including design and engineering responsibilities, and submission for review of shop drawings, reports, samples, and mock-ups. Detailed descriptions of these requirements are included in "Part 1 - General" and "Part 3 - Execution".

B. Requirements Included:

- The scope of work of this Section shall include, but not necessarily be limited to, the following systems, equipment, material, arrangements, and procedures as indicated and specified herein for:
 - a. All labor, equipment and materials.
 - b. Supply nonstandard back boxes and floor-boxes for installation by Electrical Contractor except where noted.
 - c. Termination of all SVC equipment racks.
 - d. Provide supplemental conduit, junction/pull boxes, fittings, and electrical hardware, as required for connection of Sound equipment to the Sound empty conduit system as supplied by Electrical division.
 - e. All wire, wire pulling, and termination.
 - f. All tools and measuring & testing equipment required for installation.
 - g. Daily and final cleanup.
 - h. Shop drawings, samples and mock ups, as built documentation, and operating manual.
 - i. Testing and adjustment, interim shop inspection, initial test report, final site inspection, final test report, and demonstration and instruction.
 - j. Guarantee and warranties, and maintenance and service contract.

C. Sound, Video & Communication System:

- See detailed description of the following system and specific information about the equipment, components, and material in "Part 2 Products":
 - a. Sound, Video & Communication System: Permanent Sound, Video & Communication System, including speech and music reinforcement, archival audio & video recording, music, effects, and prerecorded tracks processing and playback and stage monitor/foldback, utilizing the following subsystems:
 - b. Permanent loudspeaker positions, including rigging points, and cable management.
 - c. SVC equipment racks, including appropriate cabinetry.

D. Related Requirements:

- 1. The following systems, equipment, material, arrangements, and procedures are not included in the scope of work of this Section. Coordinate all work of this Section with the work specified in other sections (exceptions as noted):
 - A complete, pull-ready conduit system for installation of Sound, Video & Communication System wiring and devices—including all conduit and raceway, junction/pull boxes, standard back boxes, terminal cabinets and "pull group" boxes, fittings, drag line (pull line), electrical hardware, etc. (Electrical Contractor).
 - Electrical power service—including transformers, feeder cable, b. distribution panels, branch circuit panelboards, and individual wall receptacles (Electrical Contractor).
 - Sound, Video & Communication System "Sound, Video & c. Communication System" isolated ground AC power network (Electrical Contractor). Note: inter-rack AC power wiring, shall be the responsibility of the SC. Single-point termination to the racks shall be conducted on-site by the EC.
 - d. Loudspeaker suspension points
 - Equipment rack room (including lighting, furnishings, and e. finishes) (various Trades).
 - f. Painting and finishing (except as noted below for Sound, Video & Communication System equipment).
 - House telephone, data, life safety, fire alarm, and security g. systems (Electrical Contractor).

1.03 **DEFINITIONS**

- In addition to the definitions in the General Conditions, the following also apply A. to this Section:
 - 1. The term "Architect" refers to ABHA / BSA+A.
 - 2. The term "Electrical Engineer" refers to Furlow Associates Engineering.
 - The term "Consultant" refers to Acme Professional Inc. 3.
 - The term "Successful Bidder" as used in this specification refers to that 4. Subcontractor whose bid proposal is accepted by the Owner, and who is officially named as the Sound, Video & Communication Subcontractor.
 - 5. The terms "Sound, Video & Communication Subcontractor", "this Subcontractor", "this Contractor", "SVCC" as used in this specification refer to that subcontractor directly responsible for supply and installation of the Sound, Video & Communication Systems.
 - The terms "engineer" and "engineering" as used in this specification 6. refers to the interpretation, organization, and execution of the design of the Sound, Video & Communication Systems as provided in the Contract Documents.
 - 7. The term "supply" as used in this specification indicates that the Sound, Video & Communication Subcontractor shall supply, free issue, including instruction and supervision for installation by others, such equipment, components, and material of the Sound, Video & Communication Systems so as to fulfill the intent of the Contract Documents.
 - The term "provide" as used in this specification indicates that the Sound, 8. Video & Communication Subcontractor shall supply, fabricate, install,

- and make operable such equipment, components, and material of the Sound, Video & Communication Systems so as to fulfill the intent of the Contract Documents.
- 9. The terms "pre-approved equivalent" and "or as approved" as used in this specification indicate that acceptance shall be obtained from the Consultant. Refer to "Product Substitution" below.
- 10. The terms "NIC" or "not in contract" as used in this specification indicate an item or system that shall be furnished under another contract. Preparation for the future inclusion of such an item or system shall be limited to the extent outlined in the Contract Documents.
- 11. The terms "OEM" or "original equipment manufacturer" or "manufacturer" as used in this specification refer to a direct supplier to the Sound, Video & Communication Subcontractor.
- 12. The term "by others" as used in this specification and on the contract drawings indicates work not included in this section of the contract but provided by others as part of the General Contract.
- 13. "UON" denotes "unless otherwise noted."
- 14. "AFF" denotes "above finished floor."
- 15. "U" denotes "rack unit," as in "10U" to denote 10 standard 44mm (1.75") rack units, for a total of 440mm (17.5") of rack space.

1.04 SCOPE OF WORK

- A. The Sound, Video and Communication Subcontractor (SVCC) shall be responsible for all labor, equipment, material, and procedures required for the supply, fabrication, installation, commissioning, and warranty of the Production Sound, Video and Communication Systems (SV&C Systems) as specified herein and on the SV&C Systems Contract Drawings, including design and engineering responsibilities, and submission for review of shop drawings, reports, samples, and mock-ups. Detailed descriptions of these requirements are included in "PART 1 GENERAL" and "PART 3 EXECUTION".
- B. The scope of work of this Section shall include, but not necessarily be limited to, the following systems, equipment, material, arrangements, and procedures as indicated and specified herein.
 - 1. All labor, equipment, and material.
 - 2. Supply nonstandard back boxes and sequential power switching system equipment for installation by Divisions 26 and 27 except where noted.
 - 3. Termination of receptacles in Sound, Video & Communication equipment racks.
 - 4. Provide supplemental conduit, junction/pull boxes, fittings, and electrical hardware, as required for connection of SV&C equipment to the Sound, Video & Communication empty conduit system as supplied by Division 27.
 - 5. All wire, wire pulling, and termination.
 - 6. All tools and measuring & testing equipment required for installation.
 - 7. Daily and final cleanup.
 - 8. Shop drawings, samples and mock-ups, as-built documentation, and operating manual.
 - 9. Testing and adjustment, interim shop inspection, initial test report, final site inspection, final test report, and demonstration and instruction.
 - 10. Guarantee and warranties, and maintenance and service contract.

- 11. Technical Systems: see specific information about the equipment, components, and material in "PART 2 PRODUCTS":
- C. The following systems, equipment, material, arrangements, and procedures are not included in the scope of work of this Section. Coordinate all work of this Section with the work specified in other sections (exceptions as noted):
 - 1. A complete, pull-ready conduit system for installation of Sound, Video & Communication Systems wiring and devices—including all conduit and raceway, junction/pull boxes, standard back boxes, rack room terminal cabinets and "pull group" boxes, fittings, drag line (pull line), electrical hardware, etc. (Division 27).
 - 2. Installation of nonstandard back boxes for Sound, Video & Communication Systems devices (to be concurrent with other electrical work) (Division 27).
 - 3. Electrical power service—including transformers, feeder cable, distribution panels, branch circuit panel-boards, and individual wall receptacles (Division 26).
 - 4. Sound, Video & Communication Systems "sound system" isolated ground AC power network (Division 26). Note: inter-rack AC power wiring, shall be the responsibility of the SVCC. Single-point termination to the racks shall be conducted on-site by the EC.
 - 5. Loudspeaker array rigging (Theatrical Equipment Contractor see Section 11 6131 and Architectural Specification).
 - 6. Equipment rooms, rack rooms, and control rooms (including lighting, furnishings, and finishes) (various Sections).
 - 7. Painting and finishing (except as noted below for Sound, Video & Communication System equipment).
 - 8. House telephone, data, life safety, fire alarm, and security systems (Division 28).

1.05 BID REQUIREMENTS

- A. The equipment may be furnished, installed, and provided by the following:
 - 1. Masque Sound
 21 East Union Ave
 Eat Rutherford, NJ 07073
 201-939-8666
 Attn: Scott Kalata
 - Sound Associates Inc
 979 Saw Mill River Road
 Yonkers, NY 10710
 914-963-3453
 Phillip Peglow ppeglow@soundassociates.com
 - 3. Delaware AV 9 James Court Wilmington, DE 19801 302-655-1600

- 4. Brandywine Electronics 611 Carson Drive Bear, DE 302-324-9992
- 5. CTSi 212 E Main Street, Ste 214 Salisbury, MD 21801 410-583-8900

B. Post-bid

- 1. Subcontractor Submittal
 - a. Submit two (2) copies of the following lists, schedules, and bills of material, including the names of manufacturers, manufacturers' model numbers, quantities, and prices:
 - 1) Category pricing information, separately listing equipment, wire, and labor pricing for each of the following XX (XX) categories.
 - 2) A complete and accurate list of all of the equipment, components, and material specified in the Contract Documents.
 - 3) A schedule of wire and cable as specified in the Contract Documents.
 - 4) A list of requests for approval of equivalent equipment, components, material, or systems, per the requirements listed in "Product Substitution" below.
 - 5) A list of test equipment to be used in system testing and adjustment, per the requirements listed in "Part 3 Execution: Testing and Adjustment."
 - 6) A list and description of any equipment or material required for completion of this Section that is not included in the Contract Documents and is not shown on the Architectural or Electrical Contract Documents as being specified by other sections.
 - 7) A list and description of any changes required to the installation of the empty conduit system, including but not limited to relocation or resizing or reduced or additional conduit, for Sound, Video & Communication Systems equipment provided by Division 26.
 - A separate cost amount, per year, for a maintenance and service contract for a period of five (5) years. Include a complete description of services to be furnished and a schedule of planned maintenance visits. When the Sound, Video & Communication Systems Contract is awarded, the Successful Bidder shall be obligated to furnish the services described, for the fees quoted, should the Owner elect to purchase this separate contract prior to the end of the Guarantee and Warranty period. Refer to "Maintenance and Service Contract" below.

- b. In the event that additional conduit is required to fulfill the intent of the Sound, Video & Communication Systems, the bidder shall include any additional wire in the bid.
- c. Any financial or scheduling implications for additional work specified in other sections, as recommended by a bidder, shall be assessed prior to award of this Section.
- 2. Construction Manager and Consultant Review
 - a. The Construction Manager and Consultant shall refer to the lists, schedules, and bills of material outlined above in order to determine fulfillment of the requirements of the Contract Documents. Based on the Construction Manager and Consultant's review, a bid not meeting these requirements shall be rejected.
 - b. These lists, schedules, and bills of material are included for the purpose of evaluation. The acceptance a bid based on these submissions shall not be understood to relieve the Successful Bidder of the responsibility of meeting any and all requirements of the Contract Documents.

3. Product Substitution

- a. The Sound, Video & Communication Systems equipment, components, and material specified are called out in terms of products as supplied by specific original equipment manufacturers. Bids shall only be considered from those bidders who present a bid based exactly on the products specified.
- b. If an original equipment manufacturer or other supplier has permanently stopped fabrication of a specified item or has replaced an item with an almost identical item that has a new model number, the bidder notify the Architect, within sufficient time for amendment of the Contract Documents,
- c. Bidders are advised that requests for approval of equivalent equipment, components, and material of other OEMs or suppliers are permitted. Such products shall be evaluated on the basis of equivalent quality and performance. The Consultant shall be the sole judge of performance equivalency and shall give written approval, by addendum, of all product substitutions. Prior to the bid closing date, sufficient catalog data, specifications, technical information, and samples shall be submitted for a complete evaluation by the Consultant. Any proposed product substitutions must be submitted to the Construction Manager seven (7) calendar days prior to the bid closing date.
- d. While the equipment, material, arrangements, and procedures described in the Contract Documents indicate specific details for realization of the Sound, Video & Communication Systems, bidders may propose alternate products and details that shall fulfill the functional parameters of the outlined system. In such event, bidders shall submit a complete set of alternate Contract Documents not less detailed than these and following the same general format. Also submit a detailed statement indicating where the equipment, material, arrangements, and procedures that shall be offered differ from those specified in the original

Contract Documents. Prior to the bid closing date, any changes to the original Contract Documents shall be evaluated and given written approval by the Construction Manager and Consultant. Any proposed alternate products and details must be submitted to the Construction Manager seven (7) calendar days prior to the bid closing date.

1.06 RESPONSIBILITIES

A. General

- 1. Provide complete and working Sound, Video & Communication Systems as outlined in the Contract Documents.
- Carry out work in accordance with best trade practices, and engineer, fabricate, provide and install all items in accordance with the Contract Documents, the manufacturers' recommendations and in compliance with applicable codes, and consult with other trades performing adjoining work in order to provide an installation of first-class quality.

B. Extent

- 1. Provide all labor, equipment, material, and procedures required, listed, scheduled, mentioned, or implied in the Contract Documents to engineer, fabricate, install, and commission the Sound, Video & Communication Systems.
- 2. Provide also all labor, equipment, material, and any necessary incidental items not specifically called for in the Contract Documents but required for a complete and satisfactory installation of the Sound, Video & Communication Systems.
- 3. Ensure that all equipment, components, and material specified or otherwise required to complete the installation are compatible with each other and with the conditions of expected use.
- 4. Any errors, omissions or ambiguities in the Contract Documents are not to condition these requirements, but shall be brought to the attention of the Construction Manager and Consultant for evaluation of any possible effect on the intent of the Contract Documents. Submit all notifications in writing to the Construction Manager and Consultant. Lack of such notification shall be understood to indicate acceptance of all requirements of the Contract Documents, and any future claims shall be rejected.

C. Coordination

- 1. The Owner wishes to delay key SV&C Systems equipment purchases until just prior to fabrication and installation in order to take full advantage of technology advancements. Coordinate equipment purchase schedule with Consultant and General Contractor.
- Refer to Electrical & Technology Drawings to determine Sound, Video & Communication Systems device quantities and general locations. Refer also to Architectural drawings for exact device locations.
- 3. Be familiar with the requirements of Divisions 26 and 27 Electrical to ensure the coordination of the work in this Section with the work of the Electrical Contractor.
- 4. Provide the Electrical Contractor with drawings, diagrams, and other information in order to ensure proper coordination of the AC power system and Sound, Video & Communication System empty conduit

- installations. This work shall be part of this Contractor's early coordination effort, and shall be provided in a timely manner according to a schedule of the project established by the Construction Manager.
- Coordinate work of this Section with the work of other trades so that all 5. installations are executed in such a manner as to ensure proper system performance. Provide appropriate mounting of equipment and components and avoid conflicts in positioning of the various installations of other contractors and trades.
- 6. References to the Construction Manager or other trades shall in no way modify the responsibility of this Contractor to provide a coordinated, complete, and working installation of all work required by the Contract Documents.
- 7. All drawings, schedules, RFIs, and other communication shall be coordinated with and submitted through the Construction Manager.

D. Means And Methods

The Sound, Video & Communication Contractor is solely responsible for 1 the means and methods of all fabrication and installation techniques, sequences and procedures of construction, and shall be responsible for coordination of these items with and through the Construction Manager and the Consultant.

Sub-Contractors E.

Use of Sub-Contractors by the Sound, Video & Communication Subcontractor shall in no way modify its responsibility.

F. **Suppliers**

Use of a product from a particular original equipment manufacturer, 1. whether specified in the Contract Documents or substituted by the Sound, Video & Communication Subcontractor, shall in no way modify its responsibility. Refer also to General Conditions.

G. Site Dimensions And Conditions

- The Sound, Video & Communication Subcontractor is solely responsible 1. for the correctness of dimensions and quantities, shall verify site conditions, and obtain site dimensions and quantities required for proper installation of the work included in this Section; and shall be responsible for coordination of these with and through the Construction Manager. The Sound, Video & Communication Subcontractor shall take dimensions on site for all equipment and material that shall be provided (including custom fabricated components) and be entirely responsible for their accuracy.
- Examine the work of other trades at the site to ensure that all aspects of 2. the related work are in the proper condition to receive the work included in this Section.
- 3. Obtain through the Construction Manager, where necessary, copies of relevant base building Contract Documents, including shop drawings, to ascertain existing field conditions not open to view (e.g., wall or ceiling construction).
- 4. In particular, verify all necessary field conditions including, but not limited to: the size, routing, and location of all conduit and raceway. pull/junction boxes, cast-in-place back boxes, and accommodation of non-standard backboxes. Also verify size and configuration of the

- Control Rooms, House Mix Position, and Equipment Rack Rooms. Such information is critical to the production of accurate shop drawings.
- 5. Provide any additional drawings, information, or templates where work by other trades must be modified for the proper installation and operation of the work included in this Section.
- 6. Do not begin manufacture of any custom fabricated equipment or components until satisfied that the devices, as designed, shall fit in the space available.
- 7. Provide all additional items required for the completion of the Sound, Video & Communication empty conduit system, as specified in Section 27 0527 and supplied by the Electrical Contractor, including but not necessarily limited to conduit hardware, back boxes, and wire to accommodate site conditions, and in order to complete the interpretation of the Contract Documents with no change in the contract price. Any changes to equipment details and/or mounting details shall be reviewed and approved by the Construction Manager and Consultant prior to shop fabrication or field installation.

H. Design And Engineering

- 1. The requirements outlined in the Contract Documents establish basic design parameters including means of operation, control, dimensions, and visual appearance. The Sound, Video & Communication Subcontractor's design responsibilities shall include:
 - a. Interpreting the Contract Documents so as to accomplish the purposes described.
 - b. Carrying out the execution of the work.
 - c. Modifications of, and additions to, the details as may be required to fulfill the intent of the Contract Documents.
 - d. Maintaining the design/control/operation concepts as described in the Contract Documents.
- 2. The Contract Documents describe performance attributes of the systems that shall be provided under this Section and, as such, are not Professionally Engineered documents. This Contractor is responsible for the engineering of systems described in the Contract Documents.

I. Painting And Touch Up

- 1. The Sound, Video & Communication Contractor shall be responsible for painting all Sound, Video & Communication Systems equipment and components exposed to view and shall also be responsible for the correction of minor cosmetic damage so that all Sound, Video & Communication Systems equipment and components are in clean and unblemished condition at the time of the final site inspection by the Owner and Consultant.
- 2. Any non-cosmetic damage shall be promptly repaired or replaced by this Contractor, prior to the final site inspection and without cost to the Owner.

J. Cleanup

 In addition to the requirements outlined in the General Conditions, leave work areas clean and in proper order at the end of each workday. Coordinate with Owner's performance and rehearsal schedule, as required.

K. Omissions And/Or Errors

1. Omissions and/or errors within the Contract Documents shall not relieve this Subcontractor of the responsibility for providing a properly functioning installation of the Sound, Video & Communication Systems as outlined in "PART 2 – PRODUCTS".

L. Safety And Code Requirements

- 1. The Sound, Video & Communication Systems equipment, material, arrangements, and procedures shall conform to the applicable local building, electrical and safety codes in the State of Delaware and all other applicable code requirements, with industry standards of operation and practice, and applicable safety requirements. The completed installation shall allow the users to work and operate the Sound, Video & Communication systems in a safe environment.
- 2. Regulations, codes of practice, and other reference documents cited in the Contract Documents shall apply to the work of this Section with the same authority as if included word for word in this specification.
- 3. Where provisions of the Contract Documents supplement those of cited reference documents, the more stringent provisions shall apply. Refer also to General Conditions.

1.07 SUBMITTALS

A. Project Timetable

- 1. Submit a Sound, Video & Communication Systems project timetable for approval, after consultation with the Construction Manager and the Consultant.
- 2. This timetable shall outline scheduling and dates for all project milestones including design and engineering, shop drawing submittal and review, sample and mock-up submittal and approval, shop fabrication, interim shop inspection, site installation, testing and adjustment, initial test report submittal and approval, final site inspection, final test report submittal and approval, operating manual and as-built documentation submittal and approval, demonstration and instruction, and project completion.
- 3. Be aware of the following when preparing the project timetable:
 - a. The Consultant shall be allowed at least fourteen (14) days for review of each submittal.
 - b. Each submittal shall be revised and resubmitted as required by the Consultant.
 - c. The Consultant reserves the right to modify or disapprove the submittal list or timetable.

B. Pre-Submittal Meeting

1. The Sound, Video & Communication Subcontractor shall meet with the Construction Manager and the Consultant after the project timetable has been submitted and prior to beginning work on shop drawings. The project manager and chief project designer for the Sound, Video & Communication Subcontractor must attend and be prepared to review the timetable, and to discuss the concepts described in the Contract Documents and proposed methods of execution of those concepts. The SVCC should expect to attend regular coordination meetings at the site for the full duration of the Project as part of this Contract.

C. Shop Drawings

- 1. Contractor Submission
 - a. Submit, through the Construction Manager as specified in the General Conditions, shop drawings for submittal to the Consultant. Shop drawings shall include all information necessary to fully explain design features, engineering details, appearance, function, fabrication, mounting, installation, and interconnection of all equipment.
 - b. This submittal shall include the following:
 - 1) Block diagrams (indicating all equipment interconnection and wiring).
 - 2) Schematic diagrams of custom circuitry and equipment.
 - 3) Equipment rack layouts.
 - 4) Patch panel layouts (including full-scale drawings of all patch panel labels).
 - 5) Connector pinouts.
 - 6) Custom receptacle plate, combination panel, and stage manager console layouts (full scale drawings required).
 - 7) Custom mounting brackets.
 - 8) Mounting conditions and methods for all devices.
 - 9) Wiring distribution diagrams and wire pulling schedules.
 - 10) Detail drawings as required.
 - c. Submit names of the original equipment manufacturers or other suppliers, the specific model numbers of all Sound, Video & Communication Systems components, appropriate OEM catalog sheets, and technical data sheets. Submit also detailed descriptions of any required modifications to the specified equipment.
 - d. Submit a complete, itemized list of all equipment and material that shall be provided as part of the Sound, Video & Communication Systems. All equipment and material shall be listed by the same name, and in the same order as it appears in "PART 2 PRODUCTS." Submit also similar lists for the portable equipment, spare parts, and test equipment to be supplied.
 - e. Shop drawings shall represent actual fabrication and installation details. Information on all shop drawings shall be designed, engineered, and drafted by this Contractor. Direct reproductions of contract drawings are not acceptable as shop drawings and shall be rejected. Requests for electronic files of contract drawings shall be denied.
 - f. Provide shop drawings separated into the various systems, where each set of drawings contains that information necessary to describe each system completely. The shop drawing submittal shall also include a fully referenced table of contents.

2. Consultant Review

a. The shop drawings shall be reviewed by the Consultant and shall be approved before the Sound, Video & Communication Subcontractor begins fabrication and installation of any aspect of the Sound, Video & Communication Systems. Note that the

- review of shop drawings by the Consultant is to determine conformance with the design concept and with information included in the Contract Documents. Only those shop drawings returned to this Subcontractor with a satisfactory review status shall be used in the execution of this Section.
- b. Non-conformities and errors detected during the shop drawing review shall be noted on the drawings and returned to the Sound, Video & Communication Contractor upon completion of the review. The Subcontractor is responsible for the completeness and accuracy of the shop drawings.
- Shop drawings or packages of shop drawings that are incomplete c. shall be marked "rejected" until such time as the complete set of relevant drawings is submitted. It is impossible for the Consultant to adequately review technical equipment submissions unless all details have been adequately represented.
- d. Approval of those shop drawings that include any nonconformities or errors that are not detected during the Consultant's review shall not relieve this Subcontractor of the sole responsibility to provide an installation adhering strictly to the requirements of the Contract Documents.
- Shop drawing review does not include engineering calculations e. by the Consultant unless expressly indicated on the drawings.

Samples And Mock-Ups 3.

- After review of appropriate shop drawings, submit one (1) sample each of the following items, clearly labeled with manufacturer name, model number, and other pertinent data, for approval by the Consultant:
 - A typical wall receptacle plate, with connector and 1) engraved legend (e.g., an "IRE" plate).
 - 2) A 300mm x 300mm (12" x 12") section of a typical combination panel, with one (1) sample of each type of scheduled connector, and sample engraved legends.
 - 3) Factory or custom finishes for equipment racks, cabinets, blank and vent rack panels, and communication control panels and pendants.
 - All cloth and/or metal grille material, with integral 4) framing or support construction where appropriate.
 - Custom paint samples for Sound, Video & 5) Communication Systems devices requiring a change in color from that supplied by the manufacturer. Each sample shall be applied to a 150mm x 150mm (6" x 6") piece of material closely matching the surface characteristics of each device type to be painted. On the back of each sample indicate the painting system, type of paint for each coat (including primer), the color and sheen of the finish coat, and description of the item(s) and location(s) where the color on the paint sample will be used.

4. **Record Drawings**

Keep a complete set of white prints of the specification and all contract drawings for this Section of the work, as well as shop

- and installation drawings. Any changes made during installation should be carefully noted and transferred to the appropriate documents to show "as-installed" work.
- b. At the time of the initial test report submission, submit one (1) corrected set of record drawings and shop/installation drawings for review by the Consultant.
- c. Late changes or adjustments, performed as corrections to punch list items or as change orders after practical completion of the contract, shall be reflected on updated record drawings by this Subcontractor.
- d. After review by the Consultant, make any required revisions to the record drawings until the contents are satisfactory to the Consultant.

5. Operating Manual

- a. Provide four (4) copies of operating manuals. Mark each section with tabular dividers using permanent labels protected by plastic. All drawings (B-size and larger) shall be folded into individual vinyl pockets (often referred to as "sheet protectors"). Include the following items:
 - 1) Title sheet labeled "Sound, Video & Communication Systems—Operating Manual", project name, and date.
 - 2) Table of contents.
 - 3) Names, addresses, and phone numbers of Sound, Video & Communication Contractor, sub-Contractors, and suppliers.
 - 4) Final version of the equipment list.
 - 5) System description.
 - 6) Operating instructions.
 - 7) Periodic maintenance procedures.
 - 8) List of all spare parts and equipment.
 - 9) Complete OEM data sheets, operating manuals, service manuals, and related documentation.
 - 10) Storage media (CD/DVD) containing purchased software, backed-up downloaded software, and digital signal processor software final configuration.
 - 11) Block and schematic diagrams of all systems.
 - Plugging key plan, showing wiring and receptacles (i.e., a quick-reference chart of combination panels, wall receptacles, and patching only).
 - 13) Device, wiring, termination, and hardware schedules.
 - 14) List of equipment design parameters including safe working capacities, maximum simultaneous operations, and similar information.
 - 15) Maintenance instructions for finished surfaces and material.
 - 16) The Final Test Report (see below).
- b. Prepare one (1) draft copy of the Operating Manual for review by the Consultant four (4) weeks prior to the final site inspection. The document shall be clearly marked "FOR REVIEW."
- c. After review by the Consultant, make any required revisions to the Operating Manual until the contents are satisfactory to the

Consultant. Four (4) copies of the final approved version shall be supplied in accordance with the General Conditions.

6. Mounted Block Diagram

a. Provide a half-size (minimum) print of each Sound, Video & Communication Systems block diagram in each corresponding control room and equipment rack room. Mount each diagram in a glass enclosed frame and securely mount in each control/rack room adjacent to the equipment racks. Block diagrams shall be of approved record drawings.

1.08 COMMISSIONING

A. Testing And Adjustment

1. Perform tests and adjustments to the Sound, Video & Communication Systems at the project milestones indicated below, and as specifically outlined in "PART 3 - EXECUTION: Testing and Adjustment."

B. Interim Shop Inspection

- 1. Demonstrate the functions of all major systems, equipment, assemblies, and subassemblies of the Sound, Video & Communication Systems in the shop or factory no later than four (4) months prior to project completion. Perform all tests and demonstrations in the presence of the Consultant. The systems, equipment, and components that shall be demonstrated include, but are not necessarily limited to, the following:
 - a. Sound System mixing consoles, with associated portable signal processing racks and cabling.
 - b. Sound System equipment racks (for Sound Control Room, and Amplifier Rack Room).
 - c. Stage Manager's Consoles, and associated extension cables.
 - d. Communication System equipment racks (for Communication Rack Room).
- 2. Notify the Consultant at least three (3) weeks prior to the date when all systems, equipment, assemblies, and subassemblies are complete and ready for testing. The equipment shall be made available to the Consultant for a period of at least one (1) week for testing and inspection prior to shipment. Do not ship any piece of equipment without either written verification of successful shop testing, or waiver of shop testing from the Consultant.
- 3. Prepare a draft of the initial test report (outlined below), indicating all pre-installation or shop testing, and submit the report to the Consultant for review prior to shipment of equipment from this Contractor's shop.

C. Initial Test Report

- Perform all testing outlined in this specification (refer to PART 3 –
 EXECUTION: Testing and Adjustment). This shall occur after
 substantial completion of the Sound, Video & Communication Systems,
 and before scheduling the final site inspection.
- 2. Submit a complete report on the results of all testing and adjustments for review by the Consultant, and also certify, in writing, that the work of this Section is complete and operational in every respect, and that the Sound, Video & Communication Systems are ready for the final site inspection.

D. Final Site Inspection

- 1. Upon approval of the initial test report, the Sound, Video & Communication Subcontractor shall notify the Construction Manager and Consultant, in writing, and schedule the final site inspection for a time no later than four (4) weeks prior to the scheduled substantial completion of the project. During this inspection demonstrate all the tests described in this specification, and be prepared to demonstrate the operation of any or all portions of the Sound, Video & Communication Systems, as requested by the Consultant.
- 2. Furnish sufficient technicians to operate all equipment and to perform such tests and adjustments as may be required by the Consultant during this inspection. Provide also sufficient engineering and field service personnel to aid the Owner and Consultant, and to direct the technicians in testing, adjusting, and explaining the systems. Ensure that ladders and other means are provided to allow access to all devices to be tested. Ensure that no other work is scheduled in the audience chamber or stage areas during the time of this inspection. All temporary bracing, scaffolding, etc., shall be removed to permit full operation of, and access to, all equipment.
- 3. Should the work inspected not be substantially performed at the time of first inspection, this Contractor shall compensate the Owner for any consulting and transportation costs incurred by the Owner and Consultant during all inspections.
- 4. If the system does not fulfill each and every aspect of the Contract Documents, make all necessary adjustments or other required changes in order to bring the installation into conformance with the Contract Documents at no additional cost to the Owner.

E. Installed System Measurement, Verification and Optimization

- 1. Upon completion of the Final Test Inspection, proceed with the measurement and optimization of the performance loudspeaker systems as described in PART 3 EXECUTION: Testing and Adjustment. This Subcontractor shall have arranged for and scheduled rental of a complete Meyer Sound Laboratories SIM3 multi-channel measurement system and shall have subcontracted a Consultant-approved SIM3 operator (Bob McCarthy [bob@bobmccarthy.com] or Andrew Hope [andrew@gerr.com] preferred) who will conduct the actual measurements and supervise the optimization of these systems with the Consultant. This measurement process shall be scheduled for a period of three (3) consecutive days for the Music Hall. Ensure that no other work is scheduled in the audience chambers or stage areas during the time of this procedure. All temporary bracing, scaffolding, etc., shall be removed to permit full operation of, and access to, all equipment.
- 2. Furnish sufficient technicians to help operate all sound system equipment and to perform the various corrective tasks that are revealed during this procedure, including rigging adjustments and polarity correction. Provide any relevant backup or spare equipment including loudspeaker drivers, amplifier modules and software/computer spares. Provide all required support equipment such as computer monitors, keyboards, two-way radios, etc. Ensure that ladders and other means are provided to allow access to all devices to be tested.

F. Final Test Report

1. After completion of the final site inspection and loudspeaker system optimization, submit a final version of the complete report on all testing and adjustment outlined in this specification for review by the Consultant. The final test report shall be accompanied by a letter certifying that the Sound, Video & Communication Systems conform to the Contract Documents, that the installation is complete in all details, that the final site inspection is complete and successful, that the system optimization is complete in all details and that the system ready to be turned over to the Owner. The final test report shall include updated results from the initial test report, printouts of the SIM3 measurement plots showing pre and post optimization, and hardcopy of final digital signal processor configurations and delay and equalization values.

G. Demonstration And Instruction

- 1. Instruct the Owner and/or the facility's operating personnel in the operation and care of the systems during two (2) separate sessions for not less than a total of sixteen (16) hours. This instruction shall include:
 - a. Operating procedures for proper use of all systems.
 - b. Proper maintenance of all systems.
 - c. Replacement procedures for user replaceable parts.
- 2. The first demonstration and instruction session shall occur directly after acceptance of the final test report. The second session shall occur at a time arranged by the Owner and/or the facility's operating personnel, and shall be no sooner than the next day and no later than one (1) month afterwards. The precise timing of these sessions shall be determined by the Owner, at the Owner's convenience. The sessions shall be recorded to digital video by this Contractor (or other format as directed by the Owner). One set of DVD's shall be submitted to the Owner within one (1) week following the recording.
- 3. Instruction shall be by qualified expert operators who have actual experience with the system in performance conditions. Submit instructors' qualifications to the Consultant at least two (2) weeks prior to the demonstration and instruction session. Should the Consultant find this Contractor's instruction personnel lacking in qualifications, the instruction sessions shall be rescheduled with new instructor(s), also pre-approved by the Consultant.
- 4. As a portion of this instruction, present the final, approved version of the Operating Manual to the Owner, Construction Manager and Consultant for preview at least two (2) weeks prior to the first instruction session. Review the contents of the Operating Manual with the Owner and/or the facility's operating personnel as part of the first session.

H. Guarantee And Warranties

- 1. General
 - a. Furnish the Owner with a written warranty in accordance with General Conditions, covering all engineering, equipment, material, and installation workmanship incorporated into the work of this Section, until two (2) years after date of substantial completion of the project.
- 2. Service Calls
 - a. All guarantee and warranty work shall be carried out at no additional cost to the Owner for any labor, parts, shipping or

transportation. Warranty replacement equipment shall be provided within 24 hours of official notice by the Owner.

3. Equipment Warranties

- a. Warranty of replacement equipment and components shall be the same as for the original devices, and shall begin on the date of installation of the replacement item. Replace spare parts used during the warranty period at no additional cost.
- b. In the absence of a maintenance and service contract (outlined below), honor all extended warranties provided by original equipment manufacturers beyond the two (2) year guarantee outlined above. The Sound, Video & Communication Contractor shall not be responsible for any labor, transportation, shipping, or miscellaneous costs not covered by the OEM incurred during service calls to repair or replace extended warranty equipment after the first year.

4. Follow-Up Testing and Adjustment

a. Provide technicians to test and adjust the Sound, Video & Communication Systems, at a mutually agreed upon time, approximately six (6) months after substantial completion of the project. This follow-up visit shall include any needed testing and repair of all items covered under the guarantee, and testing and readjustment of all items identified in the maintenance procedures. Provide a written report to the Owner and Consultant outlining the extent and results of the follow-up testing and adjustment.

5. Repeated Failures

a. If a particular component, part, or piece of equipment fails more than three times during the warranty period, the failure shall be deemed to be due to engineering and/or installation error. In this event take action within 24 hours of official notice by the Owner to modify or correct the defect by replacement of faulty equipment and/or changes to engineering concepts or installation methods.

6. Maintenance And Service Contract

- a. In addition to providing guarantee and warranty service, make available to the Owner a separate service contract to begin after expiration of the guarantee and warranties outlined above. The service contract shall be at the Owner's cost, renewable yearly, and available for the life of the Sound, Video & Communication Systems. This service contract may be provided directly by this Contractor or through an approved local or regional service center.
- b. The service contract shall cover every item provided and supplied under this section of the contract. Service offered shall include, but not necessarily be limited to, repair of components, temporary "loaner" equipment, replacement of parts, and a regular maintenance program for all equipment in the Sound, Video & Communication Systems. The service contract shall specify a guaranteed response time.

PART 2 – PRODUCTS

2.01 EQUIPMENT AND MATERIAL

- A. All equipment and material shall be new, of the highest quality appropriate to the application and of uniform appearance throughout the system. Only equipment and materials from established original equipment manufacturers of sound and communication equipment shall be used. Components shall be commonly available and field replaceable, where possible.
- B. All equipment and component enclosures shall be welded or tightly fitted assemblies of sheet steel with angles, channels and tees forming rigid frames for support of outer cabinetwork and internal components. Construction with anodized aluminum is acceptable only where specified.
- C. Unless otherwise stated, all rack-mounted electronic and electrical equipment and components shall conform to EIA 19" standard. Any devices not specifically designed to be rack mountable shall be adapted, by professionally acceptable methods, to meet the EIA standard.
- D. The rack height of all equipment and components noted in this specification is in 1.75" (44mm) units, or spaces. (i.e., a 5.25" device, that is three rack spaces high = "3U").

2.02 EQUIPMENT

	description	mfr	model	qty
	AUDITORIUM			
Α	Mixing System / Playback			
1	F-XLR Stage Box to M-XLR Tails, 12ch , 50'	Whirlwind	ME-12-M-NR-50	1
2	Digital Mixing Console System, 48kHz,	Midas	Midas M32R	1
3	Console fixed format I/O, 32 Analog ip, 16 Analog op, 4 AES op	Midas	DL32	1
4	Console fixed format I/O, 16 Analog ip, 8 Analog op	Midas	DL16	1
5	2U Rack for DL16	Gator	G-Tour 2U	1
6	Rack Mounted Analog Mixer	ART	MX622	2
7	iPad Air 2, 32GB, WiFi, w/ Apple SmartCase	Apple	iPad Air 2 32GB WiFi	1
8	WiFi Router	Netgear	R6700 AC1750	1
9	CD/Bluetooth/USB Digital Audio Player	Tascam	CD-400U	1
В	Main Loudspeaker System - Auditorium			
1	Main Loudpeaker Array	d&b audiotechnik	ALi90	3
2	Main Loudspeaker Array Frame	d&b audiotechnik	Z5455	1
3	Proscenium Side Loudspeaker	d&b audiotechnik	E12-D	2
4	Prosc Side Loudspeaker Flying Adapter	d&b audiotechnik	Z5254	2
5	Backstage Foldback Loaudspeaker	d&b audiotechnik	5S	4
6	Backstage Foldback Loaudspeaker Brkt	d&b audiotechnik	Z5422	4
7	Custom #12 NL2 Cables for Permanent Loudspeakers	Whirlwind	\$200 Allowance	1

8	Miscellaneous Rigging Materials incl Safeties for all Loudspeakers	Custom	\$500 Allowance	1
9	4-Ch Power Amplifier w/ DSP Processing	d&b audiotechnik	30D	2
С	Self-powered Portable Monitor/Effects Loud	speakers		
1	Self-powered Monitor Loudspeaker - Large	Yamaha	DXR10	2
	de a salada a			4
D	description Wireless Microphones	mfr	model	qty
1	UHF Combo Wireless Mic System Recvr/Handheld/Bodypack	Sennheiser	EW312/335G3-A	2
2	UHF Wireless Mic System Recvr/Handheld Tx	Sennheiser	EW335G3-A	2
3	Active Antenna Splitter for 4 Receivers, incl PSU & 2 Antenna	Sennheiser	G3OMNIKIT4	1
4	Rechargeable Battery Pack for Handheld & Bodypack Tx	Sennheiser	BA2015	6
5	Dual Drop-In Charger for Handheld & Bodypack Tx	Sennheiser	L2015	3
6	PSU for up to 3 L2015	Sennheiser	NT3-1US	1
7	Handheld Tx Charger Adapter	Sennheiser	LA2	6
8	Miscellaneous Rigging Materials for Antenna Mounting	Sennheiser	\$100 Allowance	1
Е	Wired Microphones & Direct Boxes			
1	Handheld, dynamic Microphone	Shure	SM-58LC	5
2	Handheld, dynamic Microphone w/switch	Shure	SM-58S	1
3	Dynamic Instrument Microphone	Shure	SM-57LC	2
4	Condenser Instrument Microphone, cardioid	Shure	SM-81LC	2
5	Condenser Recording Microphone, cardioid, Matched Pair	Neumann	SKM 184 ni	1
6	Hanging Chorus Microphone	DPA	SC4098-BM15	4
7	Direct Box, Jensen, single-ch	Radial	JDI	2
8	Direct Box, Jensen, PC/iPod	Radial	JPC	1
9	Instrument Cable, 10'	Whirlwind	SN10	2
10	iPod Cable, 3.5mm Stereo>2x M-XLR, 6'	Whirlwind	MST2XM06US	2
F	Microphone Stands			
1	Microphone Stand, Round Base, Black	K&M	260/1	2
2	Microphone Stand, One-hand clutch, stackable, Black	K&M	26075	6
3	Microphone Stand, Tripod w/ Boom, Black	K&M	210/8	2
4	Microphone Stand, Short, Round Base, w/ Boom, Black	K&M	25960	1
5	Microphone Boom Arm	K&M	211/1	4

6 7 8 9	Microphone Clamp Microphone Holder Microphone Desk Stand, Black Microphone Stand Crate	K&M K&M Atlas Custom	238 240/5 DS7E \$500 Allowance	2 2 4 1
G	Portable Microphone Cable			
1	Microphone Cable, Canare/Neutrik, 10'	Whirlwind	MK410NP	4
2	Microphone Cable, Canare/Neutrik, 25'	Whirlwind	MK425NP	8
	description	mfr	model	qty
3	Microphone Cable, Canare/Neutrik, 50'	Whirlwind	MK450NP	8
4	Microphone Cable, Canare/Neutrik, 100'	Whirlwind	MK4100NP	2
Н	Wired Intercom System			
1	Intercom Main Station, 2ch	ClearCom	PS-702	1
2	Intercom Beltpack, 1ch	ClearCom	RS-701	4
3	Intercom Wall Speaker Station, 4-Gang, 2ch	ClearCom	KB-702	6
4	Intercom Wall Headset Station, 2-Gang, 2ch	ClearCom	HB-702	1
5	Intercom Handset	ClearCom	HS-6	2
6	Intercom Headset, Single muff	ClearCom	CC-300-X4	5
ı	Assistive Listening System			
1	FM Assistive Listening System, w/transmitter, 4 receivers	Listen	LS-17-072	1
2	Receiver, digital	Listen	LR500	8
3	Charging case, for 4 receivers	Listen	LA-317-01	3
4	Rechargeable battery	Listen	LA-362	12
5	Neck loop, for telecoils	Listen	LA166	2
6	Ear Buds	Listen	LA-161	12
J	Audio Program Monitor System			
1	House Microphone	Shure	VP82	1
2	Microphone Mounting Hardware, Allowance	Custom	\$50 Allowance	1
3	Portable Phantom Power Supply	Samson	S-Phantom	1
4	70v Power Amplifier w/ Rack Kit	Crown	CSA-140Z	1
5	Surface Mount loudspeaker w/ 70V transformer	Tannoy	DVS4T	8
6	Volume control, 70V, 35W	Atlas Sound	AT35D	
K	Equipment Rack, Portable Equipment Storage	Cabinet		
1	Equipment Rack	MiddleAtlantic	BGR-4532-SA-LRD	2
2	Rack Top, vented	MiddleAtlantic	BGR-LVT	2
3	Rear door, with cable entry	MiddleAtlantic	BGR-RDC45	2
4	Cable Lacer Bars - 10pk	MiddleAtlantic	LBP-1.5	2
5	Vent Panels as Required	MiddleAtlantic	\$100 Allowance	1
6	Blank Panels as Required	MiddleAtlantic	\$100 Allowance	1
7	1sp Brush Panel	Middle Atlantic	BR1	2

8 9 10 11 12 13	3U Rack Drawer w/ Lock Rack Panel Screws TechFlex, 1.25"-2.75" expandable tubing Rack Mount power Conditioner Internal Rack Work Light Cable Management, in rack, vertical cable tray	MiddleAtlantic MiddleAtlantic TechFlex Furman MiddleAtlantic Hellerman, equal	TD3LK HP500 PET8-50-BK PL-PRO C WL60 2x2, 3x3	1 1 4 2
	description	mfr	model	qty
14	Storage Cabinet w/ 6 Shelves, 48"w x 19"d x 72"h	McMaster Carr	4775T71	1
15 16	48port Gigabit Network Switch 24port Gigabit Network Switch	Hewlett Packard Hewlett Packard	TBD TBD	1 1
L	Custom Panels, Patch Panels			
1	Custom Panel, laser-etched, black aluminum	WW Custom	C01	1
2	Custom Panel, laser-etched, black aluminum	WW Custom	C02	1
3	Custom Panel, laser-etched, black aluminum	WW Custom	C03	1
4	Floorbox incl: FMCA2200, MPK, MPR, BB200D	Mystery Elec	C04	1
5	Floorbox incl: FMCA2200, MPK, MPR, BB200D	Mystery Elec	C05	1
6	Floorbox incl: FMCA2200, MPK, MPR, BB200D	Mystery Elec	C06	1
7	Custom Panel, laser-etched, black aluminum	WW Custom	C07	1
8	Custom Panel, laser-etched, black aluminum	WW Custom	C08	1
9	Floorbox incl: FMCA2200, MPK, MPR, BB200D	Mystery Elec	C09	1
10	Custom Panel, laser-etched, black aluminum	WW Custom	C10	1
11	Custom Panel, laser-etched, black aluminum	WW Custom	C21	1
12	Custom Panel, laser-etched, black aluminum	WW Custom	C22	1
13	Custom Panel, laser-etched, black aluminum	WW Custom	'S1' Receptacles	10
14	Custom Panel, laser-etched, black aluminum	WW Custom	'S2' Receptacles	2
15	Custom Panel, laser-etched, black aluminum	WW Custom	'A2' Receptacles	3

16	Custom Panel, laser-etched, black aluminum	WW Custom	'D2' Receptacles	3
17	Custom Panel, laser-etched, black aluminum	WW Custom	"Tie Lines Patch"	2
18	Custom Panel, laser-etched, black aluminum	WW Custom	"Mic Patch"	1
19	Custom Panel, laser-etched, black aluminum	WW Custom	"Console Patch"	1
	description	mfr	model	qty
20	Custom Panel, laser-etched, black aluminum	WW Custom	"Line Patch"	1
21	Custom Panel, laser-etched, black aluminum	WW Custom	"Speaker Patch"	1
22	Custom Panel, laser-etched, black aluminum	WW Custom	"Amplifier Input"	2
23	Custom Panel, laser-etched, black aluminum	Leviton	"CAT6 Patch"	1
М	Bulk Cable, Pre-Made Cables			
1	A1 - Microphone cable, 1pr - 1000'	Belden	9451	LOT
2	A2 - Microphone cable, 2pr - 1000'	Belden	1509C	LOT
3	A4 - Microphone cable, 4pr - 1000'	Belden	1510C	LOT
4	D1 - 75ohm RG-6/U Low Loss Coaxial Cable - 1000'	Belden	1694A	LOT
5	D2 - 50ohm RG-8/U Coaxial Cable - 1 Foot	Belden	9914	LOT
6	D3 - 4x23 AWG Twisted Pair, CAT6 - 1000'	West Penn	4246	LOT
7	E1 - 20 AWG Twisted Pair, Mylar Shield-1000'	West Penn	292	LOT
8	F1 - 2x 12 AWG Stranded Copper w/ PVC Jacket - 1000'	Belden	5000UP	LOT
9	F2 - 4x 12 AWG Stranded Copper w/ PVC Jacket - 1000'	Belden	5002	LOT
10	G1 - 2x 14 AWG Stranded Copper w/ PVC Jacket - 1000'	West Penn	226	LOT
11	LOT, Pre-made Cables for all Interconnect	Custom	\$1,000 Allowance	1
12	LOT, Pre-made Cables for all Patching	Custom	\$500 Allowance	1
N	SVC ADD ALT #1 - Video Projection System			
1	7000 lm WUXGA Laser Video Projector	Panasonic	PT-RZ770	1
2	Mount for Projector	TBD	\$500 Allowance	1
3	16:10 Fixed Frame Projection Screen w/ Pro Masking Border Accessory	Da-Lite	Series 200 Lace & Grommet; 108"x192"	1

4	HDMI/VGA > HDBaseT Transmitter Wall Plate	Atlona	AT-HDVS-150-TX- WP	3
5	HDBaset-T/HDMI 8x4 Video Switcher	Atlona	AT-UHD-CLSO-824	1
6	Dual 7" HD Rack Mount Video Monitor	ELVID	SRM-7X2-LT	1
7	CD/BLU-Ray Player	Denon	DN-500BD	1
8	Apple TV; 32GB	Apple	Apple TV	1
9	iPad-based Remote Control Gateway	Global Cache	GC-100-19	1
	description	mfr	model	qty
0	SVC ADD ALT #2 - Wireless Intercom System			
1	2.4GHz Wireless Intercom System, 4 Users incl. Headsets	HME	CZ11432	1
	SVC ADD ALT #3 - HD Video Camera &			
Р	Recorder			
P		Panasonic	AW-HE2P/E	1
	Recorder	Panasonic Panasonic	AW-HE2P/E AW-RP50	1 1
1	Recorder HDMI Camera, w/1/4.37 CMOS sensor		AW-RP50 AW-HS50N	-
1 2	Recorder HDMI Camera, w/1/4.37 CMOS sensor Desktop Remote Control for Video Camera	Panasonic	AW-RP50	1
1 2 3	Recorder HDMI Camera, w/1/4.37 CMOS sensor Desktop Remote Control for Video Camera Compact Live Video Switcher	Panasonic Panasonic	AW-RP50 AW-HS50N AT-UHD-EX-70C-	1
1 2 3 4	Recorder HDMI Camera, w/1/4.37 CMOS sensor Desktop Remote Control for Video Camera Compact Live Video Switcher HDMI CAT6 Extender Transmitter/Receiver	Panasonic Panasonic Atlona	AW-RP50 AW-HS50N AT-UHD-EX-70C- KIT	1 1 1
1 2 3 4 5	Recorder HDMI Camera, w/1/4.37 CMOS sensor Desktop Remote Control for Video Camera Compact Live Video Switcher HDMI CAT6 Extender Transmitter/Receiver HDBasetT > HD SDI Converter	Panasonic Panasonic Atlona AJA	AW-RP50 AW-HS50N AT-UHD-EX-70C- KIT HB-R-SDI	1 1 1
1 2 3 4 5 6	Recorder HDMI Camera, w/1/4.37 CMOS sensor Desktop Remote Control for Video Camera Compact Live Video Switcher HDMI CAT6 Extender Transmitter/Receiver HDBasetT > HD SDI Converter HD SDI Dual Hard Disc Recorder	Panasonic Panasonic Atlona AJA Blackmagic Design	AW-RP50 AW-HS50N AT-UHD-EX-70C- KIT HB-R-SDI Hyperdeck Studio 2	1 1 1 1 1
1 2 3 4 5 6	Recorder HDMI Camera, w/1/4.37 CMOS sensor Desktop Remote Control for Video Camera Compact Live Video Switcher HDMI CAT6 Extender Transmitter/Receiver HDBasetT > HD SDI Converter HD SDI Dual Hard Disc Recorder 480GB SATA Hard Disk for Hyperdeck Studio	Panasonic Panasonic Atlona AJA Blackmagic Design SanDisk	AW-RP50 AW-HS50N AT-UHD-EX-70C- KIT HB-R-SDI Hyperdeck Studio 2 480GB Ultra II	1 1 1 1 1
1 2 3 4 5 6 7	Recorder HDMI Camera, w/1/4.37 CMOS sensor Desktop Remote Control for Video Camera Compact Live Video Switcher HDMI CAT6 Extender Transmitter/Receiver HDBasetT > HD SDI Converter HD SDI Dual Hard Disc Recorder 480GB SATA Hard Disk for Hyperdeck Studio SATA Disk USB Dock	Panasonic Panasonic Atlona AJA Blackmagic Design SanDisk Xcellon	AW-RP50 AW-HS50N AT-UHD-EX-70C- KIT HB-R-SDI Hyperdeck Studio 2 480GB Ultra II HDD-01 Sata	1 1 1 1 1 1

PART 3 – EXECUTION

3.01 QUALITY ASSURANCE AND WORKMANSHIP

- A. The Sound, Video & Communication System Contractor shall follow good working practices and fabricate and install items in accordance with the manufacturer's recommendations and the Consultant's specifications. Provide quality control procedures acceptable to the Owner and Consultant. Provide a properly qualified site supervisor who shall carry out supervision duties only. Provide straight, plumb, true and aligned components throughout, and shall consult with other trades doing related work and adjoining work in order to provide an installation of first-class quality.
- B. The Consultant reserves the right to reject any part of the installation not in compliance with the Contract Documents. The Sound, Video & Communication System Contractor shall carry out any necessary remedial work or replacement free of charge and without delay to the Owner.
- C. A standard reference guide for the design, engineering, and installation of the Sound, Video & Communication System shall be Audio System Design and Installation, by Philip Giddings (Sams Publishing).

3.02 DEFINITIONS

- A. Electrical Reference:
 - 1. The following electrical references are used throughout the Sound, Video & Communication System specification:
 - a. Voltage: dBv = 20log(E1/E2)
 - b. Power: $dB = 10\log(P1/P2)$
 - c. 0dBu = 0.775VRMS; ratio of voltages measured open circuit
 - d. 0dBv = 0.775VRMS; ratio of voltages measured open circuit
 - e. 0dBV = 1.0VRMS; ratio of voltages measured open circuit
 - f. OdBm = 1mW; power level (typically 0.775V into 600-ohm load)
 - g. 0VU = +4dBm; power level referenced to 600 ohms

B. Electrical Characteristics:

- 1. Unless otherwise specified in the Contract Documents, electrical characteristics of the Sound, Video & Communication System equipment shall be as follows:
 - a. Microphone preamplifier inputs shall be balanced, have an impedance greater than or equal to 1.2k ohms, and designed to be driven from sources of 600 ohms or less.
 - b. Line inputs shall be balanced bridging, have an impedance greater than or equal to 10k ohms, and designed to be driven from sources of 10k ohms or less.
 - c. Line outputs shall be balanced, have an impedance less than or equal to 100 ohms, and designed to drive loads of 600 ohms or greater.
- C. Connector Polarity: Proper polarity of connectors on combination panels, receptacle plates, rack panels, patch panels, and other devices fabricated and/or wired by this Contractor shall be established as follows: Polarity of connectors for OEM devices and equipment may be different, and should be wired to patch panels so as to maintain consistent system polarity.
 - 1. Microphone and Line Level

a. Balanced Connection

XLR-3 connectors: pin 1 = ground/shield (do not connect to case); pin 2 = high ("hot"); and pin 3 = low ("cold").

1/4" T/R/S phone connectors: sleeve = ground/shield; ring = low ("cold"); and tip = high ("hot").

b. Unbalanced Connection

XLR-3 connectors: pin 1 = ground/common/shield (do not connect to case); pin 2 = high ("hot"); and pin 3 = tie to pin 1 only.

1/4" T/S phone connectors: sleeve = ground/common/shield; and tip = high ("hot").

Phono (RCA) connectors: sleeve or shell = ground/common/shield; and center pin = high ("hot").

- 2. Multiconductor Application
 - a. Multipin connectors: Refer to the manufacturer's specifications.
- 3. Data Connection
 - a. RJ45 connectors: Refer to the manufacturer's specifications.
- 4. Video and RF Level
 - a. BNC-type connectors: sleeve or collar = ground/shield; and center pin = signal ("hot").
- 5. Low Impedance Loudspeaker Level
 - Neutrik NL4 series connectors used for bi-amplified or passive (mono-amplified) Sound, Video & Communication System loudspeakers: pin "1+" = Low frequency or full-range driver "+"; pin "1-" = Low frequency or full-range driver "-"; pin "2+" = High frequency driver "+"; pin "2-" = High frequency driver "-"
 - b. Neutrik NL4 series connectors used for 70.7 volt lines: pin "1+" = high ("hot"); pin "1-" = N/C; pin "2+" = N/C; and pin "2-" = low ("common").
- D. Transducer Polarity: Proper polarity of electro-acoustic transducers shall be established as follows, with exceptions as noted:
 - 1. Microphone
 - a. Positive acoustic pressure on the microphone diaphragm produces a positive voltage on pin 2, with respect to pin 3 of the output connector.
 - 2. Loudspeaker
 - a. Positive voltage applied to the (+) terminal produces a
 displacement of the loudspeaker cone away from the magnet,
 thus producing a positive acoustic pressure.

3.03 INSTALLATION

- A. General:
 - 1. All equipment except portable equipment shall be securely held in place with a safety factor of at least three; except that all equipment rigged

- overhead shall be so done using safe rigging practices and with rated hardware selected to meet a safety factor of at least ten. All equipment shall be installed in such a fashion as to present no safety hazard to operating personnel.
- 2. All equipment shall be adequately ventilated when operating under worst-case power dissipation.
- 3. All metal cabinets connected to the Sound, Video & Communication System audio ground network shall be effectively isolated from any conduit or other metallic component that is connected to the building electrical safety ground.
- 4. All installation work shall be carried out in a neat and orderly fashion.

B. Wiring:

- 1. Ensure by drawing review and field survey that the conduit/raceway infrastructure is sufficient for the proper installation of the specified and required wire and cable, and/or any approved-substitute types of wire and cable.
- 2. Do not begin pulling Sound, Video & Communication System wiring through the Sound, Video & Communication System Empty Conduit System until all conduit, pull boxes, etc. for each given run (point-to-point) are completely installed by the Electrical Contractor and ready for such wire and cable installation. Undertake a field inspection of the conduit system and pull boxes, reporting any missing conduit, harp edges, missing bushings or drag lines, blocked runs, etc., prior to attempting installation of wire and cable.
- 3. The Sound, Video & Communication System Contractor shall ensure that the wire and cable is installed in a manner that shall neither cause nor permit damage to the wire and cable throughout the installation process. Damaged wire and cable (including wire and cable spliced in violation of specified requirements) shall be rejected and replaced by this Contractor at no cost to the Owner.
- 4. All microphone level, line level, video/RF level, Data level, low impedance loudspeaker level, and AC power level wiring shall be restricted to individual and separate conduit systems.
- 5. All microphone and line level wiring shall be balanced and floating, unless otherwise indicated.
- 6. Take all necessary precautions to prevent electromagnetic, electrostatic, and radio frequency interference.
- 7. Care should be taken in wiring and installation to prevent damage to wire or equipment. All wire entering racks or other equipment shall have a service loop of at least four (4) feet unused (slack) length after termination. This service loop shall be neatly bundled and harnessed in place.
- 8. No splices shall be allowed in microphone, line level, video/RF or data cables unless it is physically impossible to install the wire in one length. Splices must be approved by the Consultant on a case-by-case basis. When approved, the following splicing methods may be used:
 - a. Crimp-type "butt" splice connectors with an appropriately sized shrink tube for each conductor, as well as an overall shrink tube for all audio and intercom cable types.

- b. Female BNC "barrel" connectors for video/RF cable. Male BNC connectors shall be provided on cable ends at location of the splice.
- c. Female 8P8C (commonly known as RJ45) "barrel" connectors for Data cable. Male 8P8C connectors shall be provided on cable ends at the location of the splice.
- d. Splices in loudspeaker cable are permitted without prior approval by the Consultant. Such splices shall be kept to a minimum.
- e. Any splices made shall occur only at junction boxes, pull boxes or other permanently accessible locations. Such splices shall be listed on a schedule provided with the as-built documentation.

C. Flexible Cords and Cables:

- 1. Flexible cords used shall be selected giving consideration to ambient and conductor temperatures, wear-resistance, flexing, and mechanical stress. Vulcanized rubber, butyl rubber, EP, or silicone rubber insulated cables shall be used in preference to PVC insulated types, wherever possible. All flexible cords and cables shall comply with the current edition of the applicable local Electrical Codes and appropriate regulations as identified in "Part 1 General: Safety and Code Requirements".
- 2. Flexible cables used as hanging or trailing leads, for power or control circuits, shall comply with the previous clause and shall, if under tension, be fitted with a strain-relief center core that shall be clamped at both ends to relieve the strain on conductors. Trailing leads shall be of a suitable length for the actual application.
- 3. The segregation of conductors carrying different category circuits shall be as defined in the applicable regulations (local, state and national Electrical Codes and elsewhere herein) and shall be maintained in all flexible cables used. Adequate insulation shall be ensured on all multicore and control circuits.
- 4. Where the final connection to any equipment is by means of a flexible cable, such flexible cable shall have the same current rating as the rest of the circuit. The current ratings for the ambient temperature shall be as given in the applicable local Electrical Code.

D. Labeling and Marking:

- All Sound, Video & Communication System wire and cable shall be logically and permanently marked by the Sound, Video & Communication System Contractor. All wire shall be identified at each termination point, and shall be marked to indicate the discrete destination (i.e., a wire shall show the reference number of the jack or connector to which its other end is terminated). All cable markers shall bear the alphanumeric characters of the circuit shown on the approved shop drawings.
- 2. Wire and cable shall be marked with an approved system of durable identification markers, such as slip-on type PVC or neoprene sleeves, or with directly heat stamped characters. The use of computer-generated labeling systems, such as the Brady DAT-34 or DAT-37, is recommended. Cloth, vinyl or P-Touch tape-type markers are not acceptable.
- 3. The individual pairs of multipair cable and individual conductors of multiconductor cable shall be readily identified by permanent color

- coding of the wire insulation. Multipair or multiconductor cable that is identified only by means of the form or order of lay of individual wire is not acceptable.
- 4. All spare wire shall be marked "spare" at both ends and numbered consecutively. A "spare schedule" shall be provided indicating spare wire and cable numbers, locations and types.

E. Termination:

- 1. All connections and joints shall be made with rosin-core solder or an approved mechanical connector.
- 2. All multipin connectors shall have crimp-type gold-plated contacts.
- 3. All Contactor-terminated data cables & connections must be "certified" using industry-standard testing and verification equipment.
- 4. Where flexible cable joins fixed wiring the terminations shall be accomplished with either a pair of appropriate mating connectors or a suitable terminal block.
- 5. All terminations of shielded cables shall consist of a PVC or neoprene heat shrink sleeve covering the shield drain wire and an overall PVC or neoprene heat shrink sleeve covering the point at which the cable jacket and shield end.

F. Audio Grounding:

- 1. All shielded cables shall have their shields isolated from both the conduit system and any other shielded cables. Shields shall be continuous from source to input points. Shields shall be connected at input points only, with shields lifted at the source, except as noted below.
- 2. Microphone wiring shall have continuous shields from the microphone receptacle to microphone patch jack.
- 3. Tie-line patch points shall have continuous shield connection from one patch jack to another with no permanent connection to the audio ground network.
- 4. Unbalanced wiring, such as used in certain communication systems, shall have audio shields connected at device inputs and floated at device outputs. Strap shield to "low" side of unbalanced input.
- 5. No "doubling up" of ground points on multipin connectors or terminal blocks shall be allowed.

G. AC Power System:

1. AC power for the Sound, Video & Communication System, provided by the Electrical Contractor, is distributed at 120VAC, 60Hz. Refer to the electrical plans for further information.

H. Grounding:

- 1. The Sound, Video & Communication System audio ground network ("audio ground"), including ground source, ground conductors, and ground distribution points is provided by the Electrical Contractor. The isolation and ground continuity of this network, although the responsibility of the Electrical Contractor, shall be confirmed by the Sound, Video & Communication System Contractor prior to installation of equipment. Any ground shorts or faults shall be reported for correction by the Electrical Contractor.
- 2. The audio ground network shall be isolated from all other electrical grounds except at the source of the ground network, the building safety

- ground, specified to be of high quality. Therefore, if the connection between the audio ground network and the source of the ground is disconnected, no continuity between the audio ground and the building electrical ground shall exist.
- 3. The Sound, Video & Communication System audio ground network connects all Sound, Video & Communication System equipment positions together by a single, low impedance, ground network. All AC power wall receptacles in Sound, Video & Communication System areas, provided by the Electrical Contractor unless otherwise indicated, will be the isolated ground type, connected only to the associated audio ground spur in that area.
- 4. All Sound, Video & Communication System equipment racks containing active electronics shall be connected to the audio ground network, except as otherwise noted in this specification. Caution must be exercised so that these racks are not permanently, or in any way during operation, capable of being accidentally connected to the building safety ground.
- 5. All conduits and back boxes containing Sound, Video & Communication System wiring shall be permanently connected to the building electrical safety ground.
- 6. Video (RF) and infrared (RF) devices, being unbalanced in nature, shall not be connected to the Sound, Video & Communication System audio ground network.

I. Electrical Safety:

- 1. No voltage in excess of 25V rms AC or 24V ripple free DC shall be exposed to touch in normal use or in any equipment by the withdrawal of modules or of any plug or connector or without the removal of suitably indelibly labeled covers.
- 2. Unless specifically excepted, all live electrical parts above 50V rms AC or 60V ripple free DC, including terminals, shall remain completely shrouded by insulation or grounded metal when the main access panels are removed. The separate shrouds or covers shall require a tool to remove them to prevent inadvertent contact with live parts.
- 3. In addition, where enclosures or items of equipment containing predominantly control, computer, or similar low voltage signals also contain voltages in excess of 50V rms AC or 60V ripple free DC, clear standard warning notices indicating the maximum voltage present shall be provided on all removable access panels. Similar warning notices shall be provided where voltages exceeding 120V are present in any enclosure or item of equipment and such a voltage would not reasonably be expected to be present.
- 4. Within enclosures, racks and panels identify with prominent, standard, and indelible signage, which circuit breakers or disconnects are to be switched off in order to isolate the equipment totally. Warning notices shall also be provided on all equipment that contains live terminals after operation of its circuit breaker or disconnect. These terminals must be completely shrouded to prevent inadvertent contact.
- 5. All equipment, control stations, equipment racks, enclosures, and all metal cases, raceways, and conduit shall be efficiently grounded. Special hand held or portable equipment that is not double insulated shall have duplicated grounding connections. All grounding shall be in accordance

with the current edition of the applicable local, state and national Electrical Codes and as identified within this Section and Division 13.

J. Control System Voltage:

1. Control circuits shall generally be operated at a maximum of 24V AC or DC as appropriate, and in compliance with the protection described. Hand held control panels shall not contain line (120V) voltage unless approved. Special arrangements to feed movable panels with both line voltage and control voltage must provide suitable mechanical protection and ensure separation of services using the correct category of cable as defined in the codes and regulations identified in "Part 1 - General: Safety and Code Requirements".

K. Equipment:

- Operating parts of all equipment shall be suitably machined and finished.
 Tolerances, fits, finishes, etc., where not specified herein or indicated on
 the drawings, shall conform to best trade practices and the operational
 intent of the equipment.
- 2. All components shall be of new or recent manufacture, built within two (2) years of the date of installation and never used prior to installation.
- 3. All components and items used in Sound, Video & Communication System shall be by a recognized manufacturer specializing in professional Sound and electrical equipment and shall conform to applicable industry and code standards.
- 4. The quality of workmanship and materials of all equipment and components requiring custom fabrication shall be comparable to that of professional audio equipment as produced by specialized original equipment manufacturers.
- 5. All components used in the equipment installations shall be selected on the basis that each item, or a similarly performing substitute, will be obtainable by the Owner for a period of five (5) years should further spares be required.
- 6. All electronic components shall be readily available from at least two recognized manufacturers.
- 7. Custom firmware (EPROM, ROM, etc.) shall be supported by readily available spares.
- 8. All equipment forming part of a given system or installation, and all like components, spares and replacements shall be electrically and mechanically interchangeable.
- 9. Electrical and electronic components shall be selected for long operating life and reliability. The design of components and assemblies shall ensure that all such components work at a minimum of 25% less than their maximum ratings.
- 10. All integrated circuits containing program code and all circuits with twenty four or more pins shall be mounted in sockets.
- 11. All indicators, controls, fuses, relays, contactors, printed circuit cards, and other major components shall each be fitted with a permanent label indicating their type, rating, and duty to expedite any necessary replacement or fault finding. Where applicable, a means of identifying normally open, normally closed, and other contact configurations shall be marked on the component.

- 12. Annunciators, indicators, and fuses in individual power and electronic systems shall be standardized and approved by the Consultant before design is finalized. Indicating devices shall be of as few different types as possible and wherever practicable shall have a minimum life of 10,000 hours.
- 13. All contactors and relays (although not necessarily special approved types such as reed relays) shall be of the snap-track type developed for mounting inside equipment rack. Generally the contact rating shall be twice the expected maximum operating or inrush current whichever is the greater.
- 14. Fuses and circuit breakers shall be panel mounted. Fuses shall be mounted in indicating fuse holders, illuminated when the fuse has failed. Where fuses must be concealed they shall be easily accessible. All panels with concealed fuses shall be marked accordingly on the outside and shall have panel mounted indicator lights. Spare fuses shall be provided in holders mounted within the panel.
- 15. All internal switches shall be clearly and permanently labeled.
- 16. All connectors external to the equipment shall be of rugged metal construction with self-contained locking devices. Nonmetallic external connector shells are unacceptable.
- 17. All keyswitches and keylocks for similar components shall use the same key. Unless otherwise specified, keys shall be removable in all positions. Supply four (4) key copies for each keyswitch/keylock.
- 18. All edge connectors, ribbon cable connectors and headers shall have gold-plated contacts. All IC sockets shall be of a face-wipe, gas-tight design.

L. Assemblies:

- 1. Manufacturing, assembly, and wiring work shall be carried out by trained and experienced technicians.
- 2. Ensure that all parts and components of electrical, electronic, or computer installations are readily accessible for inspection, service, and maintenance. All components shall be replaceable without removal of operational components other than those mounted on or carrying the faulty component. All parts shall be replaceable without strain or damage to other parts.
- 3. Electrical and electronic systems shall be constructed as separately removable modules. Where a system comprises a large number of similar modules, these modules shall be designed so as to be easily interchangeable. Where such equipment is of a plug-in type, withdrawing or replacing the modules with the power "on" shall not cause damage to the units or to other equipment.
- 4. Electrically dissimilar modules or connectors shall not be able to be wrongly connected. Operating surfaces of control panels/consoles shall be of steel, aluminum, or other rigid material, reinforced where necessary to prevent noticeable panel deflection. Generally, all sides of a control panel shall be fully supported.
- 5. Where possible all control and connection panels shall have hinging or drawer access to electronics for installation and maintenance. Panels shall be held closed by captive quick locking hardware. Provide terminal strips, and neatly bundled wiring to facilitate access. Captive fasteners

shall be provided for all removable panels or parts. Any inaccessible nuts shall be fixed. Countersunk or instrument head screws shall be used on external surfaces.

M. Custom Fabrication:

- 1. Particular attention shall be paid to the selection of operational components used on custom pendants and control panels. All such components shall be selected for long life under arduous conditions, including rough use in a dusty and dirty environment.
- 2. Pushbuttons, selector switches, key switches, operating knobs, handles, and similar shall all be rugged industrial-type components, firmly mounted and capable of giving long trouble-free service. Commercial-grade units will not be accepted.

N. Finishes:

- 1. Unless otherwise indicated, all steel equipment cabinets and panels shall be finished with one coat of primer and two coats of semi-gloss baked enamel after full degreasing and rust preventing processes. Colors shall be as selected by the Consultant or as specified herein.
- 2. Aluminum panel surfaces shall be anodized black or other color as indicated herein or on the drawings.
- 3. Finishes subjected to high temperatures shall be of heat-resistant epoxy or other durable high-temperature baked-on enamel finish.
- 4. Finishes shall be durable and capable of withstanding normal usage in the areas in which they are installed.

O. Equipment Racks:

- 1. All internal wiring of electrical, electronic or computer equipment shall be in accordance with the current editions of the applicable Electrical Code and governing regulations as identified in "Part 1 General: Safety and Code Requirements".
- 2. All internal wiring shall be of adequate mechanical strength as well as electrical current rating. Multistrand cables shall be used for low current wiring in preference to solid conductors. The current carrying capacity of all cables within equipment enclosures shall take account of de-rating factors and ambient temperatures in accordance with applicable local, state and national Electrical Code regulations.
- 3. All terminal strips shall be logically positioned and indelibly marked in accordance with the circuit drawings. Generous space shall be left for installation of the external cables.
- 4. All terminals, to which connections are to be made by Division 16, shall have clear markings that are unique for each terminal and are as identified on the shop drawings.
- 5. All internal wiring shall be color coded and contained within raceways. At least 40% space shall be available as initial spare capacity. All the conductors of a given power circuit shall be contained within the same conduit or raceway. All internal wiring shall be protected from mechanical damage.

P. Labeling:

1. All wall receptacle plates shall be engraved and filled to indicate the reference number of the circuit to which each is attached. Such numbers will, when applicable, be referenced to the patch panel jack to which the

- circuit connects. Refer to the contract drawings for reference numbers and designations.
- 2. Panels and receptacles must be readable in dim lighting. Quality of engraving and filling, letter sizes, etc. shall comply with "Part 2 Products: Receptacle Plates" of this specification and as approved by the Consultant through shop drawing and sample submittal.
- 3. All legends shall be engraved and filled in a color as indicated on the drawings, unless otherwise noted below.
- 4. Where required, engraved, adhesive-backed lamacoid labels shall also be mechanically fixed in place only in those cases where there is no risk of damage to a device's internal components or wiring.

Q. Noise from Equipment

- 1. The residual noise and hum output of the systems shall be such that PNC-15 or below can be measured at the center of main floor, and the character of the remaining noise must be random, with no audible discrete frequency components.
- 2. Where a control panel or rack is to be used or located in an operational area, such as on stage, a gallery, or control room, there shall be no acoustic noise associated with the panel. No internal cooling fans or similar moving or magnetic equipment shall be permitted unless approved by the Consultant in writing.
- 3. Operation of switches, pushbuttons, relays, solenoids, and similar shall not be audible to members of the audience (even in the control rooms with the window open).

R. Spare Parts

- 1. Supply spare parts to be stored on-site for all user serviceable equipment and systems. A sufficient quantity of bulbs, fuses, knobs, switches, and other miscellaneous parts shall be supplied. Refer to "Part 2 Products" for spares of electronic and transducer parts to be supplied.
- 2. Label all spare parts with manufacturer's part number, designation, description, and location(s) where part is used. Provide neatly labeled storage containers for all spare parts, including special static free wrapping for electronically sensitive parts.
- 3. The spare parts shall be released to the Owner after completion of the commissioning procedure.

S. Site Work

1. The Sound, Video & Communication System Contractor shall be responsible for delivery, storage and handling of equipment and tools during the period of the installation.

T. Painting

- 1. Except for special requirements as approved by the Consultant, each painting system shall use paint products of one manufacturer to ensure compatibility of primer and undercoat with top coats.
- 2. All paint products shall be factory prepared of the best grade and quality (front line) produced by the manufacturers, subject to approval by the Consultant.
- 3. Finish coats on components exposed to view at all locations shall be two (2) coats of approved finish.

- 4. The Sound, Video & Communication System Contractor shall be held wholly responsible for the finished appearance of the painting work. Painting will be in accordance with the highest standards of the trade.
- 5. All components exposed to view shall be shop painted to match approved samples.
- 6. Re-touch all shop painted or finished work wherever necessary or as directed, including unpainted screws and other fasteners. Prime paint all patched portions in addition to all other specified coats.

U. Protection Of Work

- 1. Shipping and Storage
 - a. The Sound, Video & Communication System Contractor shall be responsible for the satisfactory packing and protection of all components and materials for shipment from the factory to the site. Any items suffering damage during transit due to unsatisfactory packing shall be replaced without charge to the Owner.
 - b. All equipment shall be packed to withstand the intended method of transport and environmental conditions expected. This Contractor shall take full account of the effects of rough handling, temperature extremes, dust, heavy rain, direct sunlight, and high relative humidity (up to 99%) during transit and installation. The packing shall, where necessary, reduce the effects of condensation.
 - c. All equipment shall be packed in sturdy containers to provide mechanical protection during shipping and storage. Provide padding, etc., as necessary to protect the equipment from vibration and shock.
 - d. Inner plastic sheeting shall be provided to protect the equipment from moisture and dust. Such covers shall be kept on equipment until environmental conditions have stabilized and the installation areas have been completed.
 - e. No equipment shall be shipped to the job site by this Contractor until notification by the Contractor that storage facilities are available to protect the equipment prior to installation.
 - f. The Sound, Video & Communication System Contractor shall be responsible for storage and protection of portable equipment and components until turning these items over to the Owner during commissioning. Instruct the Owner as to the proper method of storage and protection of the equipment during installation.
 - g. Refer also to the General Conditions, as amended by the Supplementary Conditions.

2. Installation

- a. Installation shall be authorized only when site conditions provide mechanical, electrical, and environmental protection suitable for the electronic equipment.
- 3. Special Protection of Electronic Equipment and Cable
 - a. This Contractor shall conform with the following minimum standards and procedures for the storage and protection of the equipment during installation:

- b. Class 1 - Cable and distribution apparatus, back boxes, face plates, terminal boxes, and rack frames may be stored and installed in weather-protected spaces under "normal" construction site conditions provided that no electronic components are contained within devices and provided that storage boxes are sturdy, well sealed, and devices are protected with imperforate inner plastic sheeting. When installed, devices must be protected from dirt, dust and moisture by sturdy impermeable plastic sheeting, and completely covered with heavy corrugated cardboard, held in place securely by duct tape. Covers shall not be removed until the area is broom cleaned. Care shall be taken to prevent damage and prolonged exposure to improper site conditions during installation. In no case shall devices remain uncovered overnight during installation or while work is taking place causing high dirt dust or moisture levels in the area of placement.
- c. Class 2 Control panels, spare parts, and test equipment (except as listed under Class 3) shall be protected and treated as per the Class 1 devices with the following additional provisions:

 Equipment shall be stored in an air-conditioned secure space.

 Equipment shall not be shipped until such space exists on site and is approved by the Consultant and Contractor. Control panels with electronic components may be installed providing they are protected as described under Class 1 description above, but electronic components must be removed and shall not be installed until the area of installation is broom cleaned and all dirt, dust and moisture producing work is completed in the area. All other equipment in this class shall not be installed until the area of installation is broom cleaned, "blown" clean with pressurized air, mopped, secure, and air conditioned.
- d. Class 3 Mixing consoles, filled equipment racks, and other electronic equipment shall not be shipped to site until the control rooms are finished, air conditioned, dust free, broom and mop cleaned, secure, and in all respects complete and ready for occupation. This class of equipment shall not be unpacked until the system is complete in all other respects. Under no circumstances may any equipment in this class be removed from the control rooms into or through spaces that are not cleaned, air conditioned, and complete.

3.04 TESTING AND ADJUSTMENT

A. General

- 1. Perform tests and adjustments to the Sound, Video & Communication System as outlined in this specification. These tests and adjustments shall be completed at the time(s) specifically indicated in "Part 1 General: Commissioning."
- 2. Provide a minimum of two qualified technicians to assist in tests, adjustments, and final modifications during the testing and adjustment period.
- B. Preparation

- 1. Ensure that all equipment racks, panels, and back boxes have been adequately cleaned of dirt, dust, and debris. Reassemble all equipment and replace all panels and covers with the necessary screws and/or other appropriate hardware prior to the final site inspection.
- 2. Before applying AC power to Sound, Video & Communication System equipment, perform a complete system inspection on the site to verify that all items are correctly installed and will operate safely as specified in the Contract Documents.
- Verify also that each individual section of the Sound, Video & Communication System has been correctly installed and is fully operational.

C. Conditions

- 1. Do not use any major control equipment intended for installation in the Sound, Video & Communication System for the purpose of checking or testing wiring or circuitry until such time as requirements for "Class 3" equipment meet the environmental conditions described in "Special Protection of Electronic Equipment and Cable" above. Provide testing apparatus, substitute control equipment, or other devices for testing wiring and circuitry prior to the existence of these conditions at all locations of Sound, Video & Communication System equipment.
- 2. Electroacoustic measurements shall only be made once all interior room finishes are completed and all performance equipment is in place and operational. Such equipment includes, but is not necessarily limited to, audience chamber seating, acoustic isolation doors, acoustic canopies, and acoustic control curtains and banners.

D. Test Equipment

- 1. The following test equipment, provided at the expense of the Sound, Video & Communication System Contractor, shall be available on site during all testing and adjustment sessions, initial and final site inspections, and demonstration and instruction sessions. Provide all appropriate monitors, adapters, cables, and connectors necessary to interconnect the test equipment devices to each other and to the Sound, Video & Communication System equipment.
 - a. Multi-Function Audio Signal Generator/Analyzer
 - Neutrik Minirator MR2 / Minilyzer ML1, or approved equal
 - b. Digital Multimeter
 - 1) Fluke 77 IV Series, or approved equal.
 - c. Polarity Testing System
 - 1) LA Audio PC90 or approved equal
 - d. Impedance Meter
 - 1) Goldline ZM-1, or approved equal.
 - e. Sound Level Meter
 - 1) MiniAnylyzer, approved equal
 - f. Two-channel FFT-Based Electroacoustic Analysis System
 - 1) SIA SMAART
 - 2) General: Computer-based electroacoustic measurement system requiring proprietary equipment and a certified operator. Provides dual-channel FFT transfer- function measurements, phase response, delay

locator and real-time analysis and ability to perform these measurements with test signals and with program (music) occurring during performances.

- g. Two-Way Radios
 - 1) Motorola UHF, or approved equal.
 - 2) Quantity: Six (6), with spare battery & charger.
- 2. Requests for alternate test equipment shall be submitted to the Consultant for approval shall meet or exceed the manufacturers' published specifications for the above components. No exceptions.

 Nonprofessional test equipment, including "custom-built" components, shall not be acceptable.

E. Procedure:

- 1. Perform the following tests and adjustments to the Sound, Video & Communication System. All test results and system adjustments shall be fully documented for inclusion in the Initial and Final Test Reports. Refer to "Part 1 General: Commissioning".
- 2. Continuity
 - a. All permanent Sound, Video & Communication System wire and cable shall be tested for continuity after installation in conduit and before termination in panels or racks. Also test for shorting contact between any and all conductors in a multipair or multiconductor cable and between each conductor and the conduit (building safety ground). Use a continuity meter for all tests.
 - b. All Sound, Video & Communication System wirepaths shall be tested to ensure that device inputs and outputs, assigned to particular circuits or channels, terminate to the correct location, and that all corresponding labeling is accurate.
 - c. Measure and verify electrical and electroacoustic polarity of all Sound, Video & Communication System components to ensure that the entire system is properly connected (i.e., the system shall be "in phase"). Ensure that absolute polarity is maintained throughout all signal paths, regardless of patching or other routing changes.
 - d. Document all wiring or termination changes made in order to maintain system polarity.

3. Impedance

- a. Measure and document the impedance of each microphone and line level line terminated with a 600-ohm 1% precision resistor, at 250Hz, 1kHz, and 4kHz, while disconnected from any device input. The load impedance value shall be greater than the resistive load.
- b. Measure and document the impedance of each low-impedance loudspeaker line to an unconnected receptacle, at the patch panel, terminated at the opposite end with an 8-ohm 1% precision resistor, at 250Hz, 1kHz, and 4kHz, while disconnected from any device input. The load impedance value shall be greater than the resistive load.
- c. Measure and document the impedance of each low-impedance (nominal 2 to 8-ohm) loudspeaker line while disconnected from

- the power amplifier. The load impedance value shall be greater than the total rated impedance of all connected loudspeaker
- d. Test each full-range loudspeaker line at 63Hz, 250Hz, 1kHz, 4kHz, 8kHz, and 16kHz.
- Test each band-limited loudspeaker line (i.e., bi-, tri-, or e. quad-amp systems) at the maximum number of test frequencies that fall within the frequency range of the driver under test.
- Measure and document the impedance of each 70.7V f. loudspeaker line at 250Hz, 1kHz, 4kHz, and 8kHz, while disconnected from the power amplifier. The load impedance value shall be greater than the total rated impedance of all connected voice-coil transformers.

4. Radio Frequency Interference

Use a minimum 60 MHz bandwidth analyzer in conjunction with a. loudspeaker or infrared receiver/headset monitoring to ensure that the Sound, Video & Communication System under test is free of spurious oscillation and radio frequency interference (RFI). Measure and document all results.

5. Gain Structure

- Set and document input and output gain controls on all Sound, a. Video & Communication System components to provide appropriate signal balance (i.e. unity gain) and optimum signal-to-noise ratio for each signal path. Unity gain shall be set by adjusting the gain of each active device (excluding power amplifiers and mixer/amplifiers) for input level equals output level by using a reference signal of 0dBy pink noise at the mixing console output.
- Ensure that a minimum of 18dB of headroom exists for each b. gain stage. The overall system gain (excluding mixer/preamplifiers, mixer/amplifiers, and power amplifiers) through any signal path from any input to any output shall be unity + 1.5 dBv.
- Conduct listening tests from center of coverage of each highc. frequency horn device to determine that there is no audible hiss or distortion.

Electronic Signal Path 6.

- Measure and document frequency response, signal to noise ratio a. (S/N), maximum output before clipping, total harmonic distortion (THD), and any spurious noise and/or hum signals of all electronic components in the Sound, Video & Communication System. Measured values must be as published by the manufacturer, or better.
- With unity gain levels set, measure and document electrical b. frequency response for all discrete signal paths from the mixer through each active device, including mixer/amplifier outputs with the loudspeaker lines disconnected. Also test typical signal paths through each combination of mixer input to output. Use a -60dBy (0.8mV RMS) sine wave signal at microphone inputs from 20Hz to 20kHz and a 0dBv (0.775 VRMS) sine wave

- signal from 20Hz to 20kHz at line level inputs. Deviation shall be within +/-1.0dBv from the range of 30Hz to 20kHz, or the specified bandpass for a particular circuit. (Refer to manufacturers' published data).
- c. With unity gain levels set, measure and document signal to noise ratio for all discrete signal paths from the mixer through each active device with mixer input shorted.
- d. Measure and document maximum output before clipping (headroom) and total harmonic distortion of each active device with methods recommended by the equipment manufacturer.
- e. With unity gain levels set, measure and document any spurious noise and hum signals such as 60Hz, 120Hz with harmonics, high frequency oscillation, clicks, pops, or noise spikes for all discrete signal paths from the mixer through each active device, including the mixer/amplifier outputs with loudspeaker lines disconnected. If any unwanted signals are detected, troubleshoot and correct or modify as necessary.

7. Power Output

a. Measure and document the output power of each power amplifier and mixer/amplifier, using a sine wave oscillator with less than 0.5% THD as an input source. Terminate each power amplifier channel output with a load resistor to match the nominal loudspeaker impedance. Apply a 1KHz signal at a level to achieve 10 dB below full rated power output of the mixer/amplifier. Observe the sine wave with an oscilloscope to insure that full voltage for rated power can be reached without noticeable deformation of the waveform.

8. Buzzes, Rattles, Distortion

a. Apply a sine wave sweep at a slow rate from 30Hz to 10kHz at 6dB below full rated power output of each amplifier in the Sound, Video & Communication System with output connections made to all loudspeaker drivers or voice-coil transformers. Adjust test frequency range to compensate for band-limited low-voltage loudspeaker lines (i.e., bi-, tri-, or quad-amp circuits) or 70.7 volt loudspeaker lines. Listen carefully to each loudspeaker for electromechanical buzzes, rattles, distortion, or other objectionable noises and correct all causes of such defects. If cause is outside Sound, Video & Communication System equipment and/or the scope of this section of the contract, promptly notify the Owner and Consultant of the cause and suggested corrective procedure.

F. Sound, Video & Communication System Testing

 The following Sound, Video & Communication System Tests shall be conducted as part of the SMAART measurement and optimization process. Sound, Video & Communication System Testing will require two 8-hour sessions scheduled to ensure quiet ambient noise levels in the test area. The Sound, Video & Communication System Contractor shall provide a certified SMAART technician to operate the SMAART System.

- a. Sound Pressure Level: Measure and document sound pressure level of loudspeaker arrays throughout the seating areas and adjust suspended loudspeaker aiming, as necessary, to achieve a coverage of +/- 3dB, or better, with a peak continuous level of 105dB SPL. Take all readings at seated ear level height.
- b. Loudspeaker Array Driver Alignment: Measure and document the loudspeaker driver alignment of the components of each loudspeaker array. Adjust precision signal delay units as necessary to achieve the best average signal alignment between adjacent components.
- c. Frequency Response: Measure and document the frequency response of each loudspeaker array, as measured in both the reverberant field and near field (with windowed FFT methods), to ensure that the frequency response is within +/-3dB from 100Hz to 3kHz, and rolls off at a rate of 3dB/octave +/-3dB from 3kHz to 12kHz (and beyond, if possible). Apply the pink noise source at a line input of the mixing console. Adjust fixed Sound, Video & Communication System equalization as necessary. If discrepancies arise, the final curve shall be based on the average of the values measured. Hard copy documentation shall be recorded for both time-energy-frequency analysis and ISO one-third octave band frequency response measurement.
- d. Speech Intelligibility: Perform subjective and/or objective speech intelligibility measurements or surveys throughout the facility and make adjustments as necessary to the Sound, Video & Communication System for maximum speech intelligibility. Submit proposed methods of testing to the Consultant for approval.

3.05 PROGRAMMING

- A. At the completion of the Testing process, and in conjunction with the Consultant, Project Architect and Design Team, and other trades, the Sound, Video & Communication System Contractor shall provide full time technical support for ten (10) 12-hour days of Ride Programming. Two (2) technicians shall be provided for the entire duration of the Programming period.
- B. Technical personnel should be prepared to adjust loudspeaker positions, facilitate required changes to Sound, Video & Communication System equipment programming, and troubleshoot any technical problems that may arise during Ride Programming Sessions.

END OF SECTION